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# ***JPRS Report***

# **Soviet Union**

## ***Economic Affairs***

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# Soviet Union Economic Affairs

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15 AUGUST 1988

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## ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

### Methodology for Estimating USSR Gross National Product

18200232 Moscow *VESTNIK STATISTIKI* in Russian  
No 6, Jun 88 (signed to press 31 May 88) pp 30-42

[Article titled: "Methodology of Estimating USSR Gross National Product"]

#### [Text] INTRODUCTION

In 1988, the USSR introduced into the practice of economic estimates a gross national product (GNP) index widely used in foreign countries and in international statistics to supplement the system of consolidated indices (national income, social product, and others) calculated according to the Marxist-Leninist theory of reproduction on a large scale. The GNP index, characterizing the end results of the economic activity of both material production and the non-production sphere, makes it possible to expand and deepen analysis of the processes of socialist reproduction, make direct comparisons of the levels and proportions of the economic development of the USSR and foreign countries, and increase the reliability and accuracy of international comparisons.

The methodology outlined in this document for calculating the USSR GNP has been developed taking into account the recommendations of UN statistical bodies<sup>1</sup> and also the principles and specific organizational forms of the USSR economy. It reflects the content of the GNP and its components, and the methods of calculating and estimating them. The composition of certain GNP components, basically having to do with the production and use of material values, is defined in the Basic Methodological Provisions for Compiling the Statistical Balance of the National Economy of CEMA Member-Countries.<sup>2</sup>

Special attention in the methodology is given to tables for conversion from national income (under the methodology of balance of national economy) to GNP.

#### I. CONCEPT AND GENERAL DEFINITIONS OF GNP

1. The GNP is the broadest index of the end results of economic activity as a whole for the national economy. It is designed to characterize aspects of the economic process: production of material values and rendering of services; distribution of income; end use of material values and services.

2. The GNP includes the results of economic activities of all economic units: enterprises, organizations and institutions of both the material-production sphere and the service sector, individual small holdings, and individuals engaged in individual labor activities.

The results of economic activity take the form of material values and services (material and non-material).

3. The GNP can be defined as created, distributed (in the forming income stage) and utilized (in-use).

4. Created GNP is defined as the sum of the "gross value added" of all sectors of the national economy: the GNP does not include the value of consumed natural resources, materials, fuel, energy and other material resources or the economic units of services rendered.

The "All-Union Industrial Classifier" is used in determining the sectorial structure of the GNP. An enterprise (institution) comprising an independent balance is the unit of classification. However, when enterprises (institutions) have subsidiary or ancillary types of activities which perform other (compared to the basic activities) functions and conducting independent accounting, the latter are included in those sectors of the national economy which correspond to these types of activities. For example, construction activities of industrial enterprises relate to construction, subsidiary industrial enterprises of kolkhozes and sovkhozes relate to industry, and so forth.

5. In the income formation stage, GNP can be defined as the aggregate income of economic units (and the population) from economic activities (remuneration of labor, profit, net income of kolkhozes, income received by way of individual labor activities, and so forth) and also depreciation (estimate of wear).

Thus, the GNP can be calculated as the sum of earnings of all enterprises, organizations and the population both in the material-production sphere and in the non-production sphere (service sector), and also depreciation.

6. Utilized GNP is the end consumption of material values and services, capital investments, growth in current assets, and foreign trade balance. Adding up these components makes it possible to obtain the GNP index providing an analysis of the utilization structure of the aggregate end material values and services in various directions.

7. A modification of the GNP is the gross domestic product (GDP). Unlike the GNP, which characterizes the results of the economic activities of enterprises and organizations of a given country regardless of where they are territorially located, the GDP reflects the production of material values and rendering of services by economic units on the territory of a given country.

8. The methodology presented in this document for estimating GNP makes it possible to estimate national income in accordance with concepts of the UN System of National Accounts (SNA).

9. Both the GNP and GDP are calculated in end consumer prices of material values and services. These indices are calculated in comparable prices for studying the dynamics of physical volume.

## II. ESTIMATING GNP BY THE PRODUCTION METHOD

### Section 1.

10. When determining the created GNP by the production method, intermediate consumption of material values and services is excluded from gross output. Gross output is the index of the volume of material values produced, including material services (i.e., gross production index), and the volume of non-material services rendered in terms of money.

The sphere of creating GNP includes:

—all state and cooperative enterprises and organizations of the material-production sphere;

—the activities of the population's small holdings for producing and processing raw agricultural products and for construction (also for harvesting timber products);

—individual labor activities of the population for production of material values;

—enterprises, organizations and institutions of the service sector providing non-material services:

    to the population (for money, free and on favorable terms),

    to the society as a whole,

    and to enterprises, organizations and institutions;

—public organizations (volunteer societies, associations, clubs, charitable organizations, and so forth);

—individual labor activities of the population in the area of services (providing non-material services):

    activities of persons of free professions,

    activities of hired domestics,

    services for maintaining housing (occupied by its owners),

    and other individual labor activities of the population in the service sector (providing non-material services).

Housekeeping activities for preparing food, housecleaning and so forth are not included in the sphere of production of material values and rendering services.

### Section 2. Gross Output (Gross Production)

11. The methodology of calculating the gross output of material-production sectors is outlined in the instructions on calculating the social product and national income and corresponds to the Basic Methodological Provisions for Compiling the Statistical Balance of the National Economy of CEMA Member-States.

The Volume of non-material services is calculated in the following manner:

—for enterprises operating on a cost accounting basis, in the amount of actual earnings for services provided consumers;

—for budget organizations, in the amount of current costs, including fixed asset depreciation;

—for service sector organizations partially making up their costs by payments and fees from the population, in the amount of current costs, including fixed asset depreciation. The volume of services of child pre-school institutions, in particular, is determined by this method;

—for service sector organizations operating on a cost accounting basis which make up some of their costs by grants or subsidies from the state budget, in the amount of earnings from sale of services. However, if these grants cover a large part of the costs, the volume of services is taken as equal to the sum of current costs;

—for a housing facility, in the amount of actual earnings from apartment rent;

—for financial institutions, in the amount of payments by clients for services (for example, for keeping accounts and so forth) and the sum of interest received for loans and credits less interest paid;

—for insurance institutions, in the amount of the difference between the sum of insurance payments and the sum of insurance indemnifications, calculated separately for property insurance and personal insurance;

—for the population engaged in individual labor activities in the service sector (non-material services), in the amount of earnings from providing the corresponding services.

12. The gross output (volume of non-material services) of enterprises and organizations operating on a cost accounting basis is determined in producer prices, that is, in wholesale prices of enterprises (including turnover tax) or in sale prices of the corresponding services. Turnover tax is calculated in the monetary assessment of the output of those sectors in which it is actually sold.

13. When determining the volume of services of budget organizations, the following expenditure items are taken into account:

- costs of materials, fuel, energy and other material resources;
- payment costs of selling, transportation, communications and other services;
- maintenance costs of buildings, facilities, equipment and so forth;
- other expenditures of a current nature for purchasing goods and material services;
- payment of services of a non-material nature;
- remuneration of labor;
- deductions for social insurance;
- fixed asset depreciation.

Fixed asset depreciation of budget organizations is taken as the amount of estimates made based on data on the value of fixed assets and the amortization rates used in compiling the fixed asset balance.

### Section 3. Intermediate Consumption

14. Intermediate consumption includes the current expenditures of enterprises and organizations in both spheres of the national economy for acquisition of goods and payment of services. As a rule, it must take into account the value of consumed raw materials, materials, fuel and other material resources, as well as services. However, with respect to certain budget organizations, the value of intermediate consumption can be equated to the cost of acquiring goods and services.

Intermediate consumption includes certain expenditure items which in the balance of the national economy are calculated as part of net output. These items include:

- expenditures for worker and employee business trips;
- expenditures of enterprises for purchasing goods and services, related to providing workers and employees social and cultural services;
- payment for non-material services.

Expenditures for acquisition of non-material services should include the following payments by enterprises and organizations, and also by other economic units, related to their activities for producing material values and rendering services:

- for leasing of premises, equipment, and also computer time;
- for legal consultation services;

- for agricultural services rendered by cost accounting enterprises and organizations relating to the service sector according to industry classification;
- for training personnel and improving their skills;
- for services of scientific research and design organizations;
- for advertisements in newspapers and magazines;
- for cleaning areas and similar work;
- for remuneration of transportation and communication services by organizations and enterprises of the service sector;
- for other non-material services (copying materials and documents, ticket reservations, and so forth).

Intermediate consumption does not take into account expenditures for acquisition of durable goods being included in fixed assets or major repair of buildings, facilities and equipment. Amortization (depreciation) of fixed assets also is not included in intermediate consumption.

15. When calculating intermediate consumption in sectors of the material-production sphere, figures on material production costs (less amortization) are determined according to the instructions on calculating social product and national income. Expenditures for payment of non-material services, for purchase of goods and services related to rendering social and cultural services for workers and employees, and also expenditures for business trips must be added to them.

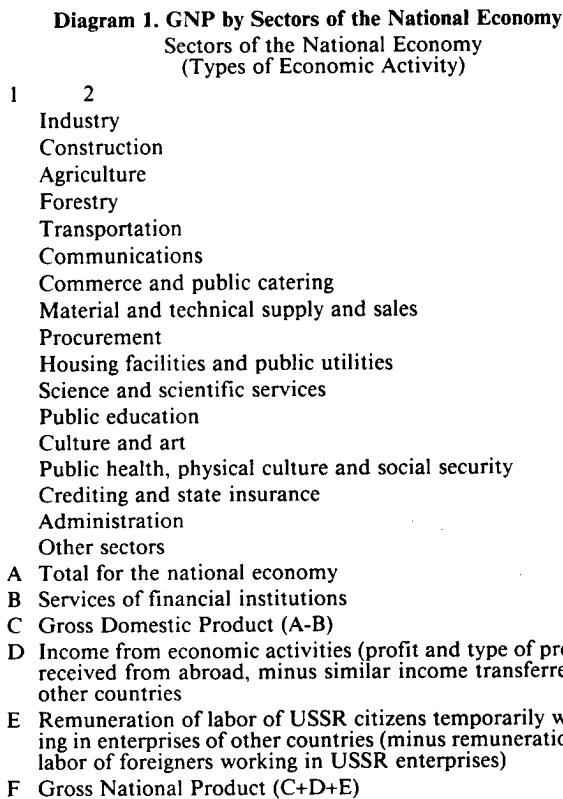
16. The difference between interest received and paid by banks should be included in intermediate consumption. Since it is difficult to relate this amount to the costs of any specific sector of the national economy, it should be excluded from the result of "gross value added."

Also included in intermediate consumption is the volume of services of organizations engaged in insuring property of enterprises (organizations, institutions), and also houses (apartments) which are the personal property of the population.

17. When determining intermediate consumption of expenditures for material values and services, acquisition off corresponding goods and services, including extra sales charges and shipping costs, are estimated in actual prices.

**Section 4. "Gross Value Added"**

18. Calculation of the "gross value added" ensures grouping the GNP figures according to the sector origination of the product. The overall pattern of the results of GNP estimates by the production method can be presented in the following manner (see Diagram 1).



19. As can be seen from Diagram 1, the system for estimating the GNP provides an index of gross domestic product (GDP), also widely used in international statistical practice, particularly in the U.N.

**III. ESTIMATING GNP BY THE DISTRIBUTIVE METHOD**

20. According to this method, the GNP is calculated as the sum of incomes of all enterprises, organizations, institutions, and the population engaged in production of material values and rendering services in the national economy: wages and other forms of remuneration of labor, deductions for social insurance, profits, and other incomes, and also depreciation deductions.

The diagram for estimating GNP by the distribution method is presented in the following table in more detail.

**Diagram 2. Gross National Product by Types of Income**  
Items of Income

| 1  | 2   |
|----|---|
| 1  | Wages of workers and employees at enterprises of the material-production sphere   |
| 2  | Remuneration of labor at kolkhozes and other cooperative enterprises in the material-production sphere  |
| 3  | Deductions for social insurance in the material-production sphere   |
| 4  | Net production of small holdings of the population  |
| 5  | Total in the material-production sphere (1+2+3+4)   |
| 6  | Wages of workers and employees in enterprises, organizations and institutions in the service sector   |
| 7  | Remuneration of labor at cooperatives in the service sector   |
| 8  | Remuneration of labor in social organizations   |
| 9  | Deductions for social insurance in the service sector   |
| 10 | Income from individual labor activities (providing non-material services)   |
| 11 | Total in the service sector (6+7+8+9+10)  |
| 12 | Profit in the material-production sphere (and elements equating to profit)  |
| 13 | Profit in the service sector (and elements equated to profit)   |
| 14 | Turnover tax in the material-production sphere, minus grants  |
| 15 | Turnover tax in the service sector (or tax equated to turnover tax)   |
| 16 | Fixed asset depreciation in material-production sphere  |
| 17 | Fixed asset depreciation in service sector  |
| 18 | Gross Domestic Product (5+11+12+13+14+15+16+17)   |
| 19 | Income from economic activities, received from abroad, minus similar income transferred abroad  |
| 20 | Gross National Product (18+19)  |
| 21 | Wages of workers and employees in the material-production sphere encompass payments made to them for work performed by piecework rates, tariff rates, salary or average wage, as well as bonuses for achieving certain results in production activities or for development and introduction of new technology. Included are leave pay, compensation for unused leave, severance pay upon termination of labor contract, and sums retained for workers being sent for training, improving skills, acquiring a new trade, and so forth. |

Determining the wages fund is at the basis of estimating this item (see Instruction on Statistics of the Number and Wages of Workers and Employees in Enterprises, Institutions and Organizations; USSR Goskomstat, 1987).

Also included are payments from the material incentive fund, for example, bonuses for results of socialist competition, for fulfilling particularly important production assignments, payments according to regional factors and factors for work under special conditions, bonuses for economizing on material resources, and others.

Also included are certain one-time bonuses not included in the wages fund and material incentive fund, for example, bonuses for discoveries, inventions, innovative proposals and others.

Wages include remuneration of labor both in money and in kind, for example, the value of food products provided, the value of apartments, public utilities and the like provided by enterprises at no cost to their workers and employees.

Work clothing is not counted in wages; however, work clothing which can be worn off-duty should be included.

Cash allowances added for tools used in work for enterprises and organizations and belonging to workers and employees are not included.

Receipts to finance business trips by workers and employees are not considered in this item. Payments for sick-leave certificates also are not included.

Wages are calculated before taxes, not actually the amounts paid.

22. Remuneration of labor at kolkhozes and other cooperative enterprises in the material-production sphere encompasses part of the income of cooperative enterprises which is distributed according to work done in money and in kind. The amounts added on and not the amounts actually paid are counted. Remuneration of labor is before taxes.

23. Deductions for social insurance include sums deducted and not actually contributed to the social insurance fund are included.

24. Net productions of small holdings of the population represents the difference between the value of their gross production and the amount of intermediate consumption. Figures net production of small holdings of the population included in national income may be used as the basis in determining this item. However, they should be decreased by the amount of payments for non-material services (for example, payments for veterinary services, for leasing equipment and premises, for legal consultations on questions relating to production activities, and so forth).

25. Remuneration of labor indices in service sector organizations are similar in content to these indices in the material-production sphere.

26. Profit is determined according to bookkeeping figures of corresponding enterprises.

27. Turnover tax is calculated minus grants and subsidies paid enterprises and organizations from the state budget. In particular, the differences in prices for agricultural output paid enterprises in order to make up for losses in connection with an increase in purchase prices for agricultural products and reimbursements from the state budget in the state housing sector are excluded.

If the volume of certain types of activities are estimated at the level of current costs, i.e., taking into account grants and subsidies received, the amount of the latter is excluded from turnover tax.

28. Depreciation of fixed production assets is taken as the amount used for calculating national income; however, the undepreciated value is not included. Depreciation of fixed non-production assets is taken as the amounts used in determining the national income consumption fund.

29. Income received by USSR enterprises from economic activities abroad, other than profit, should also include interest received for loans and credits granted. Deducted are the profit and interest for credits and loans transferred to other countries, and also the value of products transferred as compensation.

30. Estimates of national income using the UN SNA methodology can be obtained based on Diagram 2. National income (net national product) in accordance with standard UN methodology is calculated by deducting from the gross national product (item 20) fixed asset depreciation in both spheres of the national economy (item 16 + item 17).

#### IV. ESTIMATING GNP BY END USE METHOD

31. In accordance with this method, the GNP is estimated by adding up the components of its end use (see Diagram 3).

##### Diagram 3. Gross National Product by Its Types of End Use

1. End consumption of material values and services
  - 1.1. Consumption by population
    - 1.1.1. —personal consumption of goods and services paid for by population
    - 1.1.2. —consumption by population of services provided free
    - 1.1.3. —value of services of public organizations
  - 1.2. Consumption of services rendered by institutions of science and government
2. Accumulation (gross)
- 2.1. Capital investments
- 2.2. Increase in current material assets
3. Balance of foreign trade
4. Balance of income received from economic activities abroad
5. Gross National Product (1+2+3+4)

32. Personal consumption includes the population's use of personal income for purchase non-durable and durable goods (other than purchases of homes) and payment of consumer services.

It also includes consumption of products and services received in kind, for example, as remuneration of labor or received from their small holdings. Depreciation of a residence (fixed asset depreciation in a housing project) is not included in personal consumption.

Acquisition of goods held on a commission basis are not included in consumption. However, distribution charges are counted.

33. Personal consumption also includes the population's consumption of non-material services. They include:

- payments of apartment;
- payments for staying in hotels and such;
- payments for public utilities (classified as non-material services, for example, for cleaning up areas, payment for services of bathhouses, barber shops, information offices, housing-exchange offices);
- purchase of vouchers to sanatoriums, rest homes, holiday hotels and so forth;
- payments for services of medical institutions requiring payment;
- payments for instruction at courses (for studying languages and such);
- entrance fees to child pre-school institutions;
- payment for transportation and communication services;
- expenditures for acquisition of tickets to movies, theaters, museums, planetariums, zoos, and other cultural and educational institutions;
- expenditures for acquisition of tickets to sporting events (stadiums, swimming pools, and such);
- expenditures for acquisition of other non-material services (for example, veterinary services, legal consultation services, newspaper advertising, document copying, and so forth).

Personal consumption also includes services of insurance organizations (for providing property and personal insurance). The volume of these services is taken to be equal to the excess of insurance premium over insurance compensation.

Personal consumption includes the estimated value of services for operating housing belonging to the population (occupied by owners of the houses and apartments).

Purchases of goods and payment of services financed by funds for business trips are not included in personal consumption.

34. Material values and services included in personal consumption are estimated in actual prices of acquiring them, including distribution and transportation charges and expenditures. For example, consumption of goods acquired in state retail trade is estimated at state-set

retail prices, but consumption of goods purchased at a kolkhoz market is estimated at market prices. Consumption of goods in kind received by the population is estimated at average market prices.

35. The population's consumption of services provided at no charge includes the value of social and cultural and consumer services provided to the population by budget organizations of the service sector:

- in the area of public health and social security;
- in the area of education, culture and art.

36. The volume of these services is considered equal to the sum of current costs of these organizations, including an estimate of fixed asset depreciation. Partial payments and fees by the population, if they are counted in personal consumption or are considered as being redistributive, are excluded.

The volume of social and cultural services rendered by enterprises and organizations to their workers and employees are not considered in this consumption item.

37. The volume of services of public organizations is considered equal to the amount of their current costs, including an estimate of fixed asset depreciation.

38. Consumption of services of institutions of science and government is taken as the amount of the current costs of the corresponding institutions, including an estimate of fixed asset depreciation. The activities of scientific research organizations operating on a cost-accounting basis are not included in this item, since payments for the services of these organizations should be calculated as part of intermediate consumption. This item also includes current costs related to providing services such as keeping city streets clean, planting of trees and gardens in the city, sewage treatment, and so forth.

39. Capital investments include expenditures of all enterprises, organizations and institutions of the material-production sphere and service sector for construction of buildings and structures, modernization and retooling, acquisition of machinery and equipment, transport equipment, livestock (counted as fixed assets), for long-term planting, and also for land-reclamation operations. Also included are expenditures for major repairs to buildings, structures, machinery and equipment.

Capital investments include the cost of installation work, drilling operations (in deep exploratory drilling), and geological exploration operations (pertaining to specific objectives). Also included in capital investments are non-contract construction accomplished by enterprises, organizations and institutions of the national economy and also individual construction by the population.

Capital investments are estimated on a gross basis, i.e., before deducting fixed asset depreciation. However, the residual value of fixed assets removed because of their decrepit state and wear should be excluded.

40. The growth of current material assets includes a change in the value of stocks of raw materials, materials, fuel and other items of labor during the year in all enterprises, organizations and institutions of the national economy. Finally, this item includes the change in value of incomplete production in construction and industry, as well as the change in value of the total number of young animals and feeder livestock. Also included is the change in value of stocks of agricultural products of small holdings of the population.

41. Figures on the net export of material values, calculated in the context of estimates of national income, should be the basis for determining the balance of foreign trade. However, these figures must be adjusted for the net export of non-material services (passenger transport services, insurance services, and certain others).

42. The content of the balance of income received from economic activities abroad is defined above (see paragraph 29).

43. More detailed explanations about the composition and methods of estimating national income and use indices, considered components of the GNP, are given in the Basic Methodological Provisions for Compiling the Statistical Balance of the National Economy of CEMA Member-States.

#### V. TABLE FOR CONVERSION FROM NATIONAL INCOME TO GNP

44. The GNP indices can be estimated based on figures on national income and based on conversion tables containing a set of corrections which must be made to the figures on national income to obtain the GNP.

Two types of conversion tables based on figures on income and end use of product are presented in this methodology.

45. The conversion table based on figures on distribution of income is as follows (see Diagram 4).

Diagram 4.

|   |        |  |
|---|--------|--|
| A | Plus:  | Earned national income (by methodology of balance of national economy)   |
| B | Plus:  | —in service sector (less public organizations)   |
|   |        | —wages in public organizations   |
| C | Plus:  | Income from individual labor activities by the population in the service sector (providing non-material services)  |
|   | a)     | individual income from free professions  |
|   | b)     | net rent, conventionally estimated with respect to residences occupied by their owners   |
|   | c)     | income of domestics  |
|   | d)     | other net income from individual labor activities in the service sector (providing non-material services)  |
| D | Plus:  | Deductions for social insurance in the service sector  |
| E | Minus: | Funds for business trips in the material-production sphere   |
| F | Plus:  | Profit (and turnover tax or similar taxes) in the service sector, less subsidies (in housing project, sanatorium, etc.)                                      |
| G | Minus: | Volume of material services rendered enterprises in the material-production sphere   |
| H | Minus: | Expenditures by enterprises of the material-production sphere for providing social and cultural services to their workers and employees                      |
| I | Minus: | Expenditures by enterprises of the material-production sphere for representation purposes (receiving guests, etc.)   |
| J | Plus:  | Fixed asset depreciation in both spheres of the national economy   |
| K | Minus: | Volume of services of banks and other financial institutions   |
| L | Minus: | Losses of current material assets  |
| M |        | Gross Domestic Product<br>(A+B+C+D+E+F-G-H-I+J-K-L)  |
| N | Plus:  | a) Profit and profit-type income received from abroad<br>b) Wages received by USSR citizens temporarily working in enterprises of other countries            |
| O | Minus: | a) Profit and profit-type income transferred to other countries<br>b) Wages paid citizens of other countries who are temporarily working in USSR enterprises |
| P |        | Gross National Product $P=(M+N-O)$   |

46. The conversion table based on figures of GNP end use should also be used to estimate the GNP (see Diagram 5).

Diagram 5.

|   |        |  |
|---|--------|--|
| A | Plus:  | Earned national income (by methodology of balance of national economy)   |
| B | Plus:  | a) Volume of non-material services rendered (for money) the population in cost-accounting organizations (including rent)<br>b) Volume of non-material services provided the population without charge by budget organizations<br>c) Volume of non-material services rendered the population in the form of individual labor activities (cost of hiring servant, services of free professions, etc.)<br>d) Conventionally estimated rent with respect to residences occupied by their owners<br>e) Volume of services of public organizations |
| C | Plus:  | Volume of services rendered by institutions of science and government  |
| D | Minus: | Material costs in institutions of the service sector, including fixed asset depreciation   |
| E | Plus:  | Fixed asset depreciation in both sectors of the national economy   |
| F | Minus: | Losses of current material assets  |
| G | Minus: | Purchases of goods financed by funds for business trips  |
| H | Minus: | Material portion of expenditures of enterprises of the material-production sphere for social and cultural services for their workers (if not included in item "D")   |
| I | Plus:  | Balance of export and import of non-material services  |
| J |        | Gross Domestic Product<br>(A+B+C-D+E-F-G-H+I)  |
| K | Plus:  | Balance of incomes from economic activities (profit, remuneration of labor, profit-type income) abroad   |
| L |        | Gross National Product L=(J+K)   |

47. At this stage, it is not feasible to provide diagrams of conversion tables based on figures on gross output (gross production) and intermediate consumption.

## VI. PRINCIPLES OF ESTIMATING GNP IN COMPARABLE PRICES

48. In order to study the dynamics of production and end use of material values and services, estimates of GNP are also made in comparable prices, i.e., in current prices of some year taken as the base. The GNP estimate in comparable prices should be methodologically in agreement with estimates of national income in comparable prices.

The GNP is estimated in comparable prices with respect to its components characterizing the volumes of production of material values and services rendered and their end use. In other words, those components of the GNP, changes in which it is relatively easy to relate to the element of amount and the element of price, should be re-estimated in comparable prices.

The indices of created GNP are determined in comparable prices by the method of double re-estimation, i.e., the gross output (gross production) and intermediate consumption indices are initially estimated in comparable prices; then the "gross value added" is calculated by the balance method.

The indices of utilized GNP are determined in comparable prices basically by the index method, i.e., by using a system of price and tariff indices. In a number of cases, however, the method of direct re-estimation is used, i.e., the values of material values and services consumed during a reporting period at the end use stage are multiplied by the comparable prices.

49. The methods of re-estimating "material" GNP components (i.e., material values and material services) are outlined in detail in the Basic Methodological Provisions for Compiling the Statistical Balance of the National Economy of CEMA Member-States. When estimating in comparable prices the "non-material" GNP elements, i.e., non-material services, the following should be kept in mind:

—the volume of non-material services of enterprises operating on a cost-accounting basis is re-estimated in comparable prices by using tariff indices for corresponding services;

—the volume of non-material services of budget organizations is re-estimated by cost elements using corresponding cost and tariff indices.

The average indices of nominal worker and employee wages in corresponding sectors of the service sector are used for re-estimating costs for remuneration of labor.

Fixed asset depreciation of budget organizations in the service sector is taken as the amount included in the GNP in current prices.

The method described above for estimating in comparable prices the volume of non-material services rendered is also used in estimating in comparable prices the end consumption indices of non-material services.

50. The average price index, calculated for the net domestic product index as a whole, is used for re-estimating the balance of income from economic activities abroad. This index is calculated by correlating the value of net domestic product in comparable prices with the value of net domestic product in current prices.

51. There basically is no problem of overestimation of fixed asset depreciation in GNP estimates in comparable prices. Fixed asset depreciation of organizations in the service sector is the exception, which was mentioned above.

This problem does occur in full measure, however, when calculating physical volume indices of net national product. Fixed asset depreciation is used in conjunctions with estimates of this index in the same amounts as in calculating physical volume indices of national income.

#### VII. SPHERE AND PROCEDURE OF USING THE GNP INDEX

52. The GNP index can be used in international comparisons of the levels and rates of economic development of the USSR and foreign countries, and also in sum total with other consolidated indices when analyzing the socio-economic development of the USSR, in annual reports on the economic condition of the country, and for publication in statistical yearbooks. This will make it possible to characterize more completely and comprehensively the various aspects of socialist reproduction on a large scale.

The procedure for using the GNP index is established by the USSR Gosplan and USSR Goskomstat in formulating a system of plan and reporting indices.

53. This methodology is intended for estimating GNP on a national economy level, and also as a fundamental basis for developing a methodological set of tools for estimating the GNP of the union republics.

#### Footnotes

1. Approved by USSR Goskomstat and USSR Gosplan under agreement with the USSR Academy of Sciences on 31 March 1988

2. System of National Accounts (SNA), UN publication, Series F, E. 69. X.VII.3.

3. Council for Mutual Economic Assistance (CEMA). Permanent Commission on Statistics. "Osnovnyye metodologicheskiye polozheniya po statistike" [Basic Methodological Provisions for Statistics], Vol I, Part 1, Moscow, 1980.

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#### Accounting Changes Needed To Reflect True National Income Level

18200179a Moscow EKONOMICHESKIYE NAUKI in Russian No 4, Apr 88 (signed to press 15 Mar 88)  
pp 47-54

[Article by Aleksandr Danilovich Zaruba, candidate of economic sciences, docent in the Department of Political Economics of Natural Faculties of Kiev University: "On Improving the Evaluation and Utilization of the National Income"]

[Text] The basis for the achievement of a qualitatively new level of public well-being and the satisfaction of social needs, a radical acceleration of scientific and technical progress and the changeover of the economy to the basis of intensification, provision of our country's defense capabilities and solutions to the most important foreign economic problems is an increase in national income. It is no accident therefore that in all of our plans, as in all of the reports on their fulfillment, indicators of production, distribution and utilization of the national income occupy first place. Moreover, in order to characterize the level and rates of development of our national economy it is necessary to have both data concerning the production of material goods that comprise the physical-substantial content of the national income and value estimates that provide a general idea of its amount and growth rates.

As we know, a source of growth of the national income, in addition to increasing the number of people employed in material production, is labor productivity. Increasing the latter in many branches is even now the main or even the only source of growth of the national income. And this tendency goes further, the more it is extended to all of our material production.

In this connection a question is natural: to what extent is the existing evaluation of the volume of national income adequate to the dynamics of the effectiveness of production in general and labor productivity in particular? It is noted in economic literature, fairly, in our view, that "the indicator of national income now gives clearly incorrect evaluations of the final results of production activity—partially increased for individual kinds of activity, but generally reduced."<sup>1</sup> It must be noted, however, that for proof of the conclusion about the reduced quantitative evaluation of the volume of national income certain authors give a broad interpretation to Marxist-Leninist points about national income as a newly created value, including in its volume part of the amortization fund used for purposes of accumulation.<sup>2</sup> For a theoretical substantiation of such views they assert that "the norms of amortization deductions, in the first place, are subjective to a certain degree and, in the second place, they are stable while the actual need for expenditures to make up for wear and tear changes depending on the conditions for reproduction."<sup>3</sup> But even if in practice one discusses the difference between the amortization deductions and the actual need for

them, we are still speaking about part of the *transferred* values which does not contain the slightest element of *newly created* value and thus can in no way directly increase either the volume of national income in terms of value or, certainly, the natural-substantial content.

In this connection let us note that the economic function of the amortization fund consists in providing conditions for simple reproduction while in the process of accumulation carried out through the national income one provides for its expanded reproduction subsequently both from the aspect of the physical-substantial content and from the aspect of value.

The theoretical and practical interest in investigating the interconnection of the national income, the amortization fund, and the accumulation fund becomes especially significant under conditions when even under the 12th Five-Year Plan the radical changes in the quantitative renewal of fixed production capital should lead to increasing the coefficient of withdrawal of the aforementioned funds from the 1985 level of 1.8 percent to 3.1 percent in 1990, and their active part—from 3.2 percent to 6.2 percent, respectively. And the absolute sum of their withdrawal during the current five-year plan will amount to 240 billion rubles as compared to 110 billion rubles during the preceding 5 years.<sup>4</sup> In order to provide for such large changes it is necessary to have the appropriate sources and, as a rule, this means also changes in the proportions in the production, distribution and utilization of the national income both in terms of its value (monetary) expression and in terms of its physical-substantial content.

Under conditions when there is a qualitative renewal of fixed production capital it is impossible for the situation with amortization deductions not to change as well. *In the first place*, under the influence of the scientific and technical revolution it is impossible to have not only a reduction but also an increase in the objective need for them, and only for providing for simple reproduction. This is caused by cases of increased value (and the corresponding price) of means of labor intended for replacing those that are withdrawn. Here the fact is that in terms of its technical and economic characteristics the former means of labor and those replacing them, as a rule, are incompatible. Frequently in order to provide for simple reproduction it is possible to have a smaller quantity of means of labor than was required previously. Therefore the reimbursement funds should not be regarded simply as the necessary quantity of new means of labor. It is necessary to compare the social usefulness (effectiveness) of the previous means of labor and those that replace them. "Here it is not ruled out that the value (cost) per unit of useful effect (capacities, productivity, economy, and so forth) turns out to be higher for the latter. In this case for a normal course of reproduction it is necessary to have additional resources that are provided from the accumulated part of the national income. With this situation a certain part of the accumulation fund can be used as a source for simple reproduction.

*Second*, acceleration of scientific and technical progress increases the obsolescence, in a number of cases making it necessary to replace machines and equipment before the amortization period is up. The difference between the price of new means of labor and the amount of amortization deduction should be covered from the accumulation fund.

Both of the aforementioned situations (and they are quite real) mean: there can arise a situation which the implementation of simple reproduction leads to a reduction of the accumulation of the fund for accumulation and the national income. Moreover, such a situation under the conditions of accelerated renewal of the production apparatus becomes fairly broad in scale. Consequently, it is necessary to correctly determine the amount of that part of the national income which should be used to compensate for losses caused by the increased cost of new technical equipment per unit of useful effect of its application and replacement of fixed production capital that is underamortized as a result of obsolescence. Naturally, this part of the national income cannot be considered to be utilized in production or personal consumption. Yet in statistical practice the difference between the produced and utilized national income traditionally includes only losses and the foreign economic balance. As a result there is an increased volume of national income as a source of satisfying social and private needs of members of the socialist society.

*Third*, as a result of the change in the conditions for physical wear of fixed production capital the amount of amortization deductions by the time of the actual replacement of the capital might not correspond to the actual need, which also cannot but be reflected in the volume of utilized national income.

Therefore it is of great practical significance to account in the amortization norms for the actual loading of the utilized fixed production capital, the coefficient of shift work of their operation, the quantity of technological and organizational down time, in other words, all conditions in which the circulation of capital is carried out. For example, if the amortization norms had been determined on the basis of two-shift utilization of equipment but it actually operates on only one shift, in the amortization deductions there will be an accumulation of surplus monetary funds as compared to the actual wear and tear on fixed production capital; this surplus can be used for updating the production equipment in other sections or productions. The opposite situation developed when the amortization norms envisioned one-shift operation of fixed production capital and it actually operated more than this. As a result, the need for real reimbursement according to value and in physical-substantial terms can arise before the calculated amortization deductions reach an amount sufficient to fully replace the worn-out production equipment. In this case the amount of the amortization deductions per unit of produced product can be less than what is necessary for replacement and this means there will be a reduction of

the actual cost of a unit of the item and the corresponding increase in the added product. Thus the ratio between the necessary and added product and also the real volume of national income will be distorted.

Obviously the peculiarities of obsolescence and physical wear and tear on fixed production capital under conditions of acceleration of scientific and technical progress should be taken into account when introducing new norms for amortization, which should envision complete restoration of fixed capital.

*The amortization fund is a special social form that reflects the movement of fixed production capital during the process of its circulation and turnover in value terms. When analyzing the influence of this fund on the evaluation of the volume of national income it is important, in our opinion, to strictly follow this methodological point.*

If the need for the amortization fund to replace worn-out means of labor decreases for some reason, productive utilization of the formed free surplus is possible only with additional means of labor and work force. As a result of this kind of utilization one creates new value that is embodied in new goods and, consequently, there is an increase either in the consumption fund or the accumulation fund in the composition of the utilized national income.

When considering the ratio between the amortization fund and the sources of the actual process of capitalist expanded reproduction, K. Marx noted: "The accumulation of capital in monetary form is by no means material accumulation of material conditions of labor...."<sup>6</sup> Material accumulation is necessary. "It is impossible to utilize monetary funds without enlisting additional workers and means of production. The monetary funds added to the amortization which were received because of enlisting additional labor and added to the amortization are newly created values and therefore in terms of form should be included in the national income."<sup>7</sup>

What has been said shows the need to develop methods for determining the amount of newly created value and the totality of material goods corresponding to it which are the result of the utilization of part of the amortization fund for expanding the volume of applied labor. The amount of the produced national income (in terms of value and in physical terms) and the effect actually obtained in the society are underestimated because it includes the aforementioned material goods. This pertains also to an underestimation in the national income of the effect from improving the qualitative characteristics of many kinds of means of production and objects of consumption which is not linked to the growth of socially necessary expenditures on production and this means it does not cause an increase in prices. Conversely, in a number of cases an increase in the social usefulness of certain goods can outstrip the increase in their value and price. In other words, *the possibility of using these goods*

*to satisfy social and personal needs more fully, that is, the actual national economic effect, is not reflected in the evaluation of the volume of national income.*

*The new quality of economic growth* is the most important characteristic of the acceleration of the country's socioeconomic development presupposes an increasing difference between the increase in the production of means of production and objects of consumption that comprise the physical-substantial content of national income as compared to the intermediate product (raw material, fuel and energy, semimanufactured products). This new quality means also: subsequent acceleration of the growth of national income should be reflected in the fact that the increased social usefulness of the material goods that are produced outstrips the increase in their volume in terms of value. We are speaking about improving the production characteristics (such as productivity, resource saving and ecological safety) of material goods that form the substantial content of the accumulation fund keeps up with or at least contributes to changing their value. This pertains also to the usefulness of goods that comprise the physical-substantial content of the consumption fund. In other words, the final results of national income should increase.

This issue is especially crucial now since as a result of the unfavorable tendencies in the development of the economy that existed in the 1970's and the beginning of the 1980's there has been a sharp slowdown and in certain branches even a halt of the growth of the final results of production: not only did the growth rate from the national income decrease but there was a reduction of the social usefulness of individual elements of it (both means of production and objects of consumption); the increases in capital investments went to a considerable degree for increasing the volume of incomplete construction and the increases in the value of fixed capital—for making up for the increased cost of introduced catastrophes and facilities for housing and social-cultural purposes. So, according to existing estimates, the rates of increase in cost amounted to an average of approximately 5-7 percent per year for the various kinds of capacities (taking into account improvement of product quality), which exceeded the rights of increase in capital investments and startup of fixed capital.<sup>8</sup> There was a reduction of the real satisfaction of the personal needs per monetary unit of the consumption fund. The fact is that in the structure of the consumption fund there was an increased proportion of certain material goods in whose price a considerable proportion was composed of turnover tax and profit (this was brought about in particular by the changes in the assortment in the direction of increasing the more costly consumer goods in the consumption fund and corresponding reduction of items of the inexpensive assortment, of which there was frequently a shortage).

If one were to approach the measurement of the volume of national income taking into account the quality of the elements comprising it the physical-substantial content

(their capacity to satisfy public and private needs to a greater or lesser degree) its evaluation might not coincide with the one that is generally accepted. Our society spends large amounts of money from the national income to compensate for poor quality of items that do not fully meet the requirements placed on them. We make expenditures related to eliminating obviously defective work, premature replacement of means of labor that have not remained for the established time periods, compensation to consumers for increased repair and operation expenditures because of the poor quality of items, and also their losses because of this planned effect, and so forth. We support the conclusion according to which "a sufficiently complete reflection of the changes in the level and dynamics of product quality can lead to a revision of the currently accepted measurements of economic growth"<sup>9</sup> and we think that this conclusion pertains equally to the need for a more precise reflection in the evaluation of the volume of national income of the effect from scientific and technical progress, especially under conditions of acceleration of the latter. Scholars justifiably note that there is perhaps no other area in economic science where the measurement apparatus requires more methodological improvement than in the area of precise measurement of the role of scientific and technical progress in the increase of national income.

It must be noted that the national income does not fully include the effect arising as a result of the introduction into production of the achievements of science and technology and the increase in labor productivity caused by this. The fact is that the deterioration of the conditions for the extraction of natural resources causes an increase in their cost (and price) and, in the final analysis, a tendency toward growth of the capital-output ratio of the global social product. As a result of this the society is forced to use an increasingly large part of the effect not for increasing the output of means of production and objects of consumption, which would provide for an increase in the produced national income, but for compensation for the deteriorating conditions for the extraction of natural resources.

The increase in national income reflects the economic effect achieved as a result of increasing labor productivity. Additionally, it follows from the very nature of the socialist society that qualitative transformations of productive forces presuppose not only a growth of the technical and economic potential, but also social progress: improvement of working conditions, the creation of possibilities for increasing their creative nature, and so forth. As our country's economy grows stronger and if the social orientation in its development increases, an ever greater share of the resources which could be used for improvement and growth of the technical and economic potential and, on the basis of this, the growth of labor productivity and the national income, is allotted for facilitating the labor process. But the social effect achieved as a result of this which is important for the society is not given a quantitative evaluation and is not

reflected in the growth of the national income. In our opinion, there is a persistent need to develop methods for determining this effect and including it in the national income. For in this case we are speaking about improving working conditions, which from the standpoint of socialism is no less important than satisfying the needs for food, clothing, housing, and other needs that are included in the necessary product and, consequently, are satisfied through the national income.

In our opinion, the approximate amount of the social effect per unit of expenditures intended for improving and facilitating working conditions can be equated to the economic effect per unit of funds used for production accumulation and expressed in the increase in national income.

In our opinion, no less important is a correct evaluation of the increase in national income obtained as a result of more effective utilization of scientific and technical innovation. We are speaking not only about refining the volume of national income, but about providing for a fair distribution between the initial economic units and the society of "that part of the increase in national income that is the material equivalent to economizing on labor as a result of the utilization of the achievements of science and technology."<sup>11</sup>

We also need a technical solution to the problem of the extent to which material reserves in the annual accumulation satisfy public needs and should be taken into account in the volume of utilized national income. The problem of "freezing" of funds in the form of above-normative reserves has already attracted the attention of researchers.<sup>12</sup>

In the form of above-normative reserves, material supplies are excluded from turnover and circulation of production capital for a long time and sometimes forever, and they do not participate in the formation of the physical-substantial content of the national income, although they are reflected in the cost (monetary) evaluation. Reserves of material resources that are not created to satisfy public needs restrict the dynamics of economic growth in general and of the national income in particular.

But what is the criterion for determining the socially necessary level of material reserves? Roughly it might be considered that the rates of their increase should coincide with the rates of growth of national income. Yet during 1971-1985 national income increased by a factor of 2.0 and circulating capital in the national economy—by a factor of 2.8. This led to the appearance of above-normative reserves (that is, reserves whose formation exceeded the growth rates of the national income) in a volume of 136.6 billion rubles.<sup>13</sup>

It would also be expedient to rethink the question of the correctness of including international income all of that part of the output which can only conventionally be

considered to satisfy public and private needs. We are speaking about products produced outside of economic agreements. Thus in 1986 while industry fulfilled the annual plan for product sales by 101 percent, this same plan taking into account deliveries was fulfilled by only 98.6 percent.<sup>14</sup> Being included in the volume of the produced national income, the products that are not produced in keeping with orders from the consumers do not satisfy social or private needs. Consequently, these products too can be included in the national income only in the volume in which, taking into account the reevaluation and alteration in keeping with the changes in demand, reworking and so forth, they satisfy the needs of the society. The products which can in no way serve to satisfy the needs of the society should be generally excluded from the national economic effect (national income) for the given year. Taking into account the fact that material expenditures linked to production of products that are not needed by the society will participate in the formation of the fund for reimbursement for the next year, their output causes not only a direct negative effect, but also an indirect one: there is an increase in the fund for reimbursement for the next year, and this means that the volume of national income decreases in the current year.

The existing evaluation of the activity of transportation for rendering services to branches of material production also increases the actually obtained national economic effect and national income. As we know, for transportation products one uses the volume of cargo turnover expressed in ton/kilometers. With such an evaluation one gets the impression that the farther the cargo is moved the greater the degree to which the needs of the society are satisfied and the greater the volume of national income that is created in the branch. Such an evaluation contradicts the interests of the consumers of the cargo and the national economy as a whole, for whom the most economical variant is the one with the shortest distances over which the product should pass. But the existing system for evaluating the activity of cargo transportation causes inefficient movement and shipments of similar cargoes in opposite directions, and so forth. This increases the indicators of the activity of the branch but it certainly does not mean that there is an actual increase in the national economic effect.

It is necessary to improve the policy for including the volume of incomplete production in the annual national economic effect. Both in statistical reporting and in planning calculations its increase is determined in the form of the increase of material circulating capital. But which part of this increase should actually be included in the national income? As concerns the increase in incomplete production of consumer goods, they will be brought to the point of readiness (and then sold) mainly in the following year. Participating in the formation of the physical-substantial composition of the consumption fund of the following year, these objects of consumption should in that same year be fully included in the value of

the consumption fund and national income. Correspondingly the physical-substantial composition and the value (monetary) volume of the consumption fund and the national income of the current year are formed with the inclusion of objects of consumption that have been brought to the point of readiness and sold that were included in the incomplete product of the preceding year.

According to the accepted practice, an increase in incomplete construction is also included in the accumulation for the current year, and this means the national income as well. In our opinion, this increase is only a potential accumulation since it is not materialized in new fixed capital, in the process of whose consumption part of the value would be transferred to the created product the next year. Only in the year when the objects will be fully prepared and begin to operate will they begin to play a functional role of accumulation and should be included in terms of physical-substantial content and value in the accumulation fund and national income. Thus the increase in incomplete construction does not perform the function of accumulation in the year when, according to existing practice, is reflected in statistical accounting, and its inclusion in the volumes of the accumulation fund and national income is incorrect.

Fixed capital which is taken into account in the increase in incomplete construction should be included in the consumption fund of the given year under a policy similar to the one for including objects of consumption in the consumption fund. The difference here is that fixed capital is a part of incomplete production (construction) for a number of years while objects of consumption are there for only one year. Of course including in the volume of annual national income only that part of incomplete production which in the form of prepared means of production and objects of consumption can be utilized for satisfying public and private needs might not fully reflect the real labor expenditures in the given year. Nonetheless the approach that is given here from the standpoint of determining the annual national economic effect as the totality of consumer values, in our opinion, is preferable to the existing practice.

Clarifying the qualitative evaluation of the volume of annual national income from the standpoint of the national economic effect reflected by it and the social usefulness has more than just theoretical significance. It expands the possibility of determining more precisely the share of each branch in the national economy and evaluating its complete national economic effectiveness, which is one of the prerequisites for improving the proportionality and increasing the results of labor expenditures in various branches in order to accelerate economic growth as a whole.

#### Footnotes

1. Kantorovich, L. V., "Scientific and Technical Progress—Economic Problems," EKONOMIKA I ORGANIZATSIIA PROMYSHLENNOGO PROIZVODSTVA, No 1, 1985, p 25. Ozherelyev thinks that on

the basis of the erroneous idea of the essence, position and role of the reimbursement fund in public reproduction one receives incorrect information about certain theoretical and practical issues in determining the final national economic result of production (see: Ozherelyev, O., "Intensification of Reimbursement for Fixed Production Capital," VOPROSY EKONOMIKI, 1985, No 10, p 3; Ozherelyev, "Sovershenstvovaniye proizvodstvennykh otnosheniy" [Improvement of Production Relations], Moscow, 1986, p 147).

2. Koryagin, A. G., "Intensifikatsiya sotsialisticheskogo vosproizvodstva" [Intensification of Socialist Reproduction], Moscow, 1986, p 144.

3. "Ekonomicheskiye problemy razvitiya sotsializma" [Economic Problems of Developed Socialism], Vol 3, "Povysheniye effektivnosti sotsialisticheskogo vosproizvodstva" [Increasing the Effectiveness of Socialist Reproduction], Kiev, 1985, p 67.

4. See: Rychkov, N. I., "O Gosudarstvennoy plane ekonomicheskogo i sotsialnogo razvitiya SSSR na 1986-1990 gody" [The State Plan for Economic and Social Development of the USSR During 1986-1990], Moscow, 1986, p 10.

5. See Marx, K., and Engels, F., "Soch." [Works], 2nd edition, Vol 25, part II, p 419.

6. Ibid., Vol 47, p 530.

7. Ozherelyev, O. I., "Sovershenstvovaniye proizvodstvennykh otnosheniy," p 158.

8. See: Kirichenko, V., "A Five-Year Plan of Qualitative Changes in the Economy," VOPROSY EKONOMIKI, No 11, 1986, p 7.

9. Anchishkin, A., "The New Quality of Economic Growth," VOPROSY EKONOMIKI, 1986, No 9, p 5.

10. See: Kiryakov, K., "Development, Problems and Tasks of Bulgarian Economic Science" in the collection: "Economic Thought," Sofia, 1986, p 31.

11. Anchishkin, A. I., "Nauka-tehnika-ekonomika" [Science-Technology-Economics], Moscow, 1986, pp 256-257.

12. See, for example: Plyshevskiy, B., "Rate of Turnover and Intensification," KOMMUNIST, 1987, No 11; Ignatovskiy, P., "Consumer Value, Value—A Product of Labor," PLANOVYE KHOZYAYSTVO, 1986, No 10, p 77.

13. See: "The USSR National Economy in 1985," Moscow, 1986, pp 409, 554.

14. See: PRAVDA, 18 January 1987, p 2.

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**Readers' Letters Reflect Concerns About Law on State Enterprise**

18200186 SOTSIALISTICHESKAYA INDUSTRIYA in Russian 21 May 88 p 2

[Excerpts] Where are the guarantees of the irreversibility of change in the economy? Our readers ask this question time and time again. It is a question that concerns everyone who holds the fate of perestroika dear. One such guarantee is the unity of words and actions. Another is the implementation of plans indicated by the party and achieved by society through suffereing. Without deviations. Without any weakening of the resistance to stagnation. No single, not even the most powerful, organization can cope with such all-embracing, all-encompassing oversight. Such oversight is the business of society, of all of us. Letters from the readers are one of its forms. The Law on the State Enterprise (Association) is the legal foundation of the restructuring of the Soviet economy. Is the law working? Are enterprises making use of the rights granted to them by the law? Herewith a sampling of the readers' reflections.

**L. Griko, deputy general director for economics, production association for grain-harvesting combines (Krasnoyarsk)**

It is probably impossible to picture a world market where a producer would haunt the threshold of a customer in the hope of collecting his due. The economy would not be able to withstand it and would collapse. But as regards our internal "market"...

This year we converted to full cost accounting and we developed a special attitude toward money. On the one hand, we have to settle accounts with suppliers on schedule and on the other hand we must receive our direly needed money from our partners. After all, funds that are not returned to enterprises on schedule represent enormous losses to the national economy.

We economists waited for the Law on the State Enterprise to take effect and hoped that Article 16 of the Law, which provides that the buyer has the obligation to make prompt payment for goods received in accordance with the contract from his own funds or with a bank loan in certain cases, will work with full force. We also hoped that the debtor would be fined for late payments.

It would seem that this article also provided and stipulated that a higher organ would supply money from centralized funds to an enterprise-buyer that lacks its own funds and that has no right to credit. With repayment. But as the saying goes, it is only smooth on paper...

Last December we shipped 147,200 rubles' worth of various kinds of products to the Leninskaya Material-Technical Supply Base of the North Kazakhstan Oblast Agroprom but have not yet received a single ruble. The Derzhavinskaya Material-Technical Supply Base of the Turgay Oblast Rayon Agroprom also delayed payment of approximately the same sum—also since December of last year. All in all, Kazakhstan's agroindustrial associations owe us 2,703,000 rubles.

They already owe more than 70,000 rubles in fines but this does not make it any easier for the collective: we in turn pay the same amount for making late payments to our suppliers. But what does the state gain from this?

Unfortunately such examples are not exceptions. The Dalselmarsh Plant in Birobidzhan, to which we shipped threshers, failed to pay us more than a million rubles in April alone, as we understand it, not because it did not wish to do so but because the enterprise's account was empty.

The national economic mechanism is disintegrating because the customer lacks the money: we are beginning to punish one another and are transferring fines from one pocket to another. The manufacturing plant, which is really augmenting the national income, is in a lamentable situation. According to the bank's instructions, when an enterprise becomes insolvent, it is converted to the letter of credit form of payment and for defaulting on a payment is fined not 0.08 percent but 5 percent of the sum of the letter of credit. What is more, shipments of raw materials and other supplies addressed to it are held up: these days who wants to have dealings with a loser? Every such interruption in series and large-series production means enormous losses.

As regards the Law, it cannot protect the interests of work collectives that do not entirely fulfill their delivery plans. Therefore we believe that the banks (not for nothing do they call themselves our partners) should pay the bills of enterprise-suppliers regardless of the financial condition of the customer as long as the given products are contracted for and as long as they are contained in a state order. The buyer in such a case would be granted credit for higher interest—let the buyer reflect long and hard before he orders something.

In this way we can break the chain that binds dozens of collectives by "mutual guarantees" and really pinpoint the bottlenecks. For now, however, as the combine builders say, instead of *khozraschet* there is only *khozproschet* [economic miscalculation]: we have nothing with which to settle accounts with our suppliers and our customers are in no hurry to return the 6.5 million rubles they have received from us in the form of products.

**I. Pavlov, leader of brigade of grinders at the Elektromash Plant, Hero of Socialist Labor (Tiraspol)**

I turn to you very anxiously over the fate of the Law on the State Enterprise. I read the central newspapers and see that there is not a single issue that does not report

violations of this Law. Who are the principal violators? Local soviets and party organs, all manner of departmental organizations. But most often—ministries. In what way are the rights of enterprises most frequently infringed? Here the sad championship belongs to state orders and economic (at least they are called economic!) profit distribution norms.

I know that these issues have already been talked to death in the press. Nevertheless there is one point which I believe has been delicately skirted. It concerns the profit distribution norm itself. Look at what is happening at our Elektromash. We have been converted to self-financing and self-support. Minelektrotekhprom [Ministry of the Electrical Equipment Industry] stipulated that we could retain only 31 percent of our profits. Our economists calculated what we would live on and buried their heads in their hands: we would have nothing to live on!

We struck all the bells, as the saying goes: social justice is violated. But it must be said that it is very difficult to demonstrate to the collective the attractive force of the new conditions if before the transition to them the plant retained 55 percent of the profits. What can one say? The five-year plan has already been calculated and the norms stem from previous projections. But should it not be taken into account in the process that it was specifically the ministry, through its nearsighted policy, that has in large measure contributed to the total collapse of the enterprise?

The plant approached the transition to the new conditions of management with a debt of 10 million rubles. But after all, this debt was incurred not only by the collective but also by our beloved Minelektrotekhprom which in the last 15 years has done its utmost to hinder the plant's development. From year to year, our plans for technical retooling and expanding capacities have not been reinforced with the necessary allocations for equipment.

But this is what strikes me as most unjust. We pay our own debts. In the first quarter, not reckoning with the time, we launched a maximum effort and earned a profit, all of which went to pay past debts and fines. But what about the ministry? It calmly took its share of the profits. Where, I repeat, is the justice? Where is the responsibility for passivity, for conservatism? For those repeatedly condemned commanding-bureaucratic methods of management?

Social justice consists not only in giving everyone what they have earned. Everyone should also receive their just desserts for what they have not earned, for what they have ruined. But the problem is that ministries are once again out of reach.

Defending its version (approved, I note, by the collective) of the profit distribution norms, the plant appealed to Minelektrotekhprom's central commission. The commission rejected our objections. We appealed to Gosarbitrash in Moscow. Our plea "to declare the norms invalid" was forwarded to...Minelektrotekhprom. Where else can we turn?

It turns out that the Law on the Enterprise is not protected economically or juridically against the bureaucratic machine.

We recently held a regular meeting at the place where the plant's work indicators are displayed. Someone proposed including "failures for which the ministry is at fault" among them. Naturally this was proposed as a joke. But it was a serious joke. This category would never be empty. But...we talked and went our separate ways. To restructure.

**A. Kolisnichenko, chairman, people's control group, Soyuztermneft NPO (Krasnodar)**

Laws express the will of the people. In order that this will be heeded, violators must be punished. This requires that the Law have the help of the state.

But curious things are happening to the Law on the State Enterprise. It can be violated with impunity. Do you want a concrete example? Here you are. Subparagraph 3 of Article 11 **obligates** enterprises to ensure the reliable, safe, trouble-free operation of the equipment they produce. And this requires, among other measures, the organization of warranty and post-warranty repair as well as factory service for the equipment they produce.

Our Soyuztermneft NPO has been unlucky. We operate custom-made, domestically produced equipment that makes it possible to extract millions of tons of highly viscous oil. The equipment was manufactured by enterprises belonging to the Ministry of Chemical and Petroleum Machine Building under a special, very prestigious government order.

But 10 years have elapsed since then. Vanity has been satisfied, the victorious reports have been forgotten. What remains is bitter reality: the equipment occasionally goes out of commission. But the Moscow Borets Plant, like the Sum and Svessy pump plants, do not want to hear about any kind of post-warranty repair, to say nothing of factory service. Gossnab [State Committee for Material-Technical Supply] does not accept multiple purchase orders [raznaryadki] and refuses to conclude contracts for the delivery of spare parts.

Our compressors and pumps stand idle. For this reason, last year alone the state did not receive from us more than 8.5 million tons of precious raw materials. In just the first 2 months of the current year, the shortfall in planned production was 2.5 million tons. The shortage

of spare parts amounted to only several tens of thousands of rubles but our monthly losses in fines alone are measured in hundreds of thousands.

In past years, we sent our own workers to Borets at our own expense. They helped fulfill the plan for our pay. The all-powerful Borets "rewarded" us by releasing a few spare parts to us. Now, in the shadow of the law, this kind of extortion is downright indecent. But people at the Ministry of Chemical and Petroleum Machine Building have no interest in following the letter and spirit of the law. And the state is for some reason cannot use its power.

So why is the Law powerless? 5013

#### **Enterprises Form 'Concerns' Not Subordinate to Ministries**

*18200201a Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 31 May 88 p 2*

[Article by Ye. Panov (Leningrad)]

[Text] *Thirty-three industrial, scientific, and training collectives of Leningrad, having instituted concerns, have broken out of customary economic life. For the majority of collectives this is continuing. The majority are looking at the minority with interest, doubt and compassion. The prediction of the directors who were beaten down by the administrative system is more disquieting: having risked living in a new way they are falling on hard times. But would you have risked this? They are silent and think.... "What? It would be no worse. The main thing is to get out from under the thumb of the ministry."*

This might really be the main thing. A good deal has been said passionately and convincingly about departmental prejudices and the absurdities of cost accounting relations between "lower levels" and noncost-accounting relations of "upper levels." But where is the alternative that is sought for? One of the possible ones is the creation of interbranch associations. In the theses for the 19th Party Congress it is suggested that this variant be discussed.

What is the main thing in these associations? They are formed by enterprises that were once parts of ministries. On their own they can—and they must!—use the residual model of cost accounting.

The 18 subdivisions that comprise the cost-accounting concern Tekhnokhim and the 15 that comprise the cost-accounting concern Energomash were separated from their branches. Among them were those such as Izhorskiy Zavod or Kirishinefteorgsintez. Need one mention that the loss of such giants did not cause rapture in the Ministry of the Petrochemical Industry or the Ministry of Heavy Machine Building?

It took 8 months to polish up and concretize the plan for the GNPO. This was a real drama of ideas. Incidentally, why "was"? Only the first document has been completed.

"According to state logic we were trailblazers, and according to the logic of the ministry apparatus we were renegades. I have already heard this about us," said general director of the Energomashproyekt Association, Valeriy Grigoryevich Pershin. "So they are going to put a stick in our spokes."

Pershin is one of the participants in the "drama of ideas." He and the general director of the PO Nevskiy Mashinostroitelnyy Zavod imeni Lenin, Genadiy Fedorovich Velikanov gave me information about Energomash. Tekhnokhim was represented by the general director of the NPO Gosudarstvennyy Institut Prikladnoy Khimii, Boris Veniaminovich Gidaspov and the general director of the Okhtinskiy NPO Plastpolimer, Iosef Vladimirovich Konoval.

And so, what is the concern? According to B. Gidaspov's definition, it is a group of enterprises, scientific research and planning-design institutes and other organizations, for example, VUZes and tekhnikums, that cooperate to solve large national economic problems. These include, say, the output of modern dyes, materials for electronic equipment, and catalysts. Tekhnokhim was conceived as an engineering firm and takes the problem from the idea to the release of the plant turnkey at any point in the country and abroad.

"Chemistry is a broad science," said B. Gidaspov, "and the chemical industry is powerful and diverse, and therefore the field of the concern's activity is endless. And the more points there are for applying its efforts and support points, the more stable its position."

Energomash has a different, narrower profile. It is not an engineering firm but, let us put it this way, a specialized firm that works on a closed object cycle. The concern will deliver systems of equipment to the fuel and energy complex. A boiler, turbine, and generator—such is the skeleton of such a system. And the muscles and nerves are compressors, mills, automatic equipment and many many other things.

Products that are vitally important to the country are farmed out to the concerns. Up to this point the plants have not been responsible to the ministries for their output, and the ministries have not been responsible to the government. After the enterprises left the branches the traditional structure of responsibility along the vertical is not really violated, it dissolves into dust. Where is the guarantee that the country will receive from Elektrosila the generators for electric power stations and not little motors for coffee grinders? To whom will the plant report and who will have jurisdiction over it?

"The state needs our machines and money. The state does not need anything else from us. Therefore we will be under the jurisdiction of only the Soviet authorities," says G. Velikanov.

The question of the jurisdiction of the concerns is a pivotal one. To put any level in the position of the ministries, even the Council of Ministers, means to remain within the framework of the administrative system and make one more fruitless attempt to improve that which cannot be improved. To adopt economic principles of interrelations among socialist commodity producers and the socialist state which are based on mutual interest with the mandatory observance of the law means to change over to democratic positions.

The key problem is solved in favor of democracy. A gratifying fact! There is no need to fear that Elektrosila will begin to put out consumer goods instead of generators. *Instead of*—by no means *in addition to*, using capacities not engaged in the fulfillment of state orders—absolutely.

The state order will also make it incumbent upon the concerns to take the society's interests into account. The directors emphasized that this will be the state order that is received from the Gosplan or the State Committee for Science and Technology, and not a branch order disguised as a state order as is now the case. At first for Tekhnokhim it will amount to an average of 60 percent and then its proportion will begin to decrease. In Energomash, according to a prediction of G. Velikanov, the order will hardly fall below 70-80 percent. But even to have 30 percent of freedom is a great benefit.

The state order will be assigned to the concern as a whole and to each subdivision individually. All of them retain their independence and legal separation, and all of them are guided by the Law on the State Enterprise and operate as equal partners. The concern must not be responsible for their failures. Then what is the point of the association?

It is obvious. In the first place, concentration of forces and funds in the area of an expected breakthrough and sharp acceleration of scientific and technical progress with future entry into the world market. The concern is not simply a group of enterprises but a new quality. I. Konoval, for example, thinks that it is capable of creating not only a free market in scientific and technical products, but also a market of ideas.

In the second place, there is the possibility of conducting a strong social policy. It is difficult for one plant, even if it is a giant, to construct sanatoriums on the Black Sea. But this is quite possible for a concern. If after making payments into the budget Tekhnikum will have at its disposal, as is presumed, 200-250 million rubles annually, a great deal can be done.

In the third place, there are mutual assistance and mutual advantage. Of course, this is on a healthy business basis but also under conditions of the greatest benefit. This includes commodity exchange, maneuvering of resources and equipment, and loans at beneficial interest within the concern.

The mutual interest and the internal economic ties transform the concern into an integrated whole. Of course it is necessary to have administrators. There is no doubt that the association will be controlled by a council of directors (not controlled, but directed, B. Gidashev clarified). The council will elect a chairman. It was not yet clear whether he will be free or not or how many people will be at the helm. The term for the chairman will be determined perhaps by the length of the production cycle. For chemists it is about 5 years and for energy machine builders—1.5-2 years. Under the council of directors it would be expedient to convene councils of specialists (engineers, economists, legal experts, and supply workers) to solve concrete problems. There will be a management staff concern as well.

I have the feeling that the leader will become uneasy with the term "apparatus." It bothers the founders as well. Additional apparatus is practically unnecessary, they think, since the basic load will be on the enterprises where all the necessary services are and will remain. But one cannot do without some minimum necessary number of managers, strategists, and professional coordinators.

They can average 50-60 people. The number depends on the difficulty of the time, circumstances, and market conditions. The structure is flexible. But still: is there a danger of the apparatus becoming too large? In principle it always exists. Incidentally, in the opinion of V. Pershin, an organization like a concern in and of itself produces an antedote to bureaucratism.

But an antidote to monopolism? Will the concern with its power not suppress the consumer, who today is forced to take what he is offered, and will he not lose his taste for modern products? It is necessary to take this danger into account as well, the directors agreed. G. Velikanov even suggests that the monopolistic tendency will even become stronger at first. The Nevskiy Zavod imeni Lenin now has no competitors for certain kinds of compressors.

"We have potential competitors," says B. Gidashev. "At least there are those who were not included in the concern."

"Competitors will appear, and very rapidly," I. Konoval develops this thought. "Our Plastpolimer is the head organization, and the ministry automatically transfers to us all problems that arise. Therefore nobody except us works with fluoroplastics and composites. And when Plastpolimer leaves the branch it will inevitably be necessary to create firms of this profile."

Whether the GNPO's become unconditional monopolies with all of the consequences that ensue from this or, on the contrary, they bring to life worthy competitors and arm themselves with management apparatuses that are "no worse" than those of the ministries or they follow the example of the gigantic Western corporations depends on how quickly and successfully the period of establishment takes place. And it will be very difficult.

In essence the creation of the GNPO is reconnaissance. A new form, of course, cannot fit into the existing national economic structure and is objectively rejected by it. Suffice it to mention supply and financing to show how critical this problem is. Vigorous activity of the concerns is possible only with wholesale trade in means of production which, as we know, now receives 5 percent of all the deliveries in the USSR Gosnab system. As concerns financing, who will replace the ministries, through which the enterprises are now fed, and under what conditions?

The paths to solving these problems have been earmarked, for otherwise the people who instituted the concerns would simply have been committing suicide. But this is the subject for a separate conversation. There is also the objective contradiction mentioned by V. Pershin: the contradiction between state interests and the interests of the ministry apparatus. The victory of the trailblazers will mean a defeat of the bureaucrats. The successes of the concerns will deal the strongest blow to the ministries. Does this mean that discrediting the undertaking corresponds to the hopes of the apparatus? Yes and no. Let us listen to I. Konoval:

"The ministries and the enterprises that have separated themselves from them are equally interested in fulfilling the state order for 1987. Their desires coincide at this point. The basis for normal cooperation remains."

"The most important thing now is to arrange normal business and human relations with the ministries," asserts B. Gidashev.

There is hope for this. At a conference in Smolny the founders were promised all-around assistance. For their part they asked that the word "experiment" be removed from the draft. An experiment is something temporary. And they think that the concerns are serious and here to stay.

11772

#### Quality Control Official Discusses Inspection Problems

18200194 Moscow *EKONOMICHESKAYA GAZETA* in Russian No 21, 31 May 88 p 9

[Article by V. Nikitin, Director of the Kolomna Center for Standardization and Metrology (Moscow Oblast): "People Are Being Changed Rapidly Now"]

[Text] The reflections of a quality controller, about the honor of the uniform and about something more....

### Control Is Still Necessary

"Are there not enough inspections?" state-acceptance and state-inspection workers are asked. "Let's strengthen economic accountability, and then you may ask...."

This opinion is frequently encountered today, when 60 percent of Moscow Oblast's enterprises have converted to full economic accountability and self-financing.

There is also that pernicious psychology, unacceptable in our society, of the producer who is confident of the irreplaceability of his output, who strives to obtain profit by any method, even if his product is far from ideal. And the customer is obliged to take materials and outfitting goods without investigating, in order to avoid downtime. That is why until now, the flywheel of the "shaft" still has not finally come to a standstill and the manufacturers' imposed settlement has not been smashed, and it is necessary to put a stop to enterprise attempts to push their output without troubling themselves with concerns about its quality.

State quality control of output is usually associated with state acceptance. But indeed it covers only one-seventh of the output produced in our region. The quality of the rest of the industrial output, including diesel locomotives and diesel engines, metal-forming machine tools and presses, and other most important products, is inspected by state inspection. Enterprises of such huge industrial centers of suburban Moscow as Voskresensk, Ramenskoye and Lyubertsy come within our zone of activity.

It must be noted that, while state acceptance is a relatively new phenomenon, state inspection has been in existence a long time. Enterprises that produce poor articles are paying out ever-increasing sums of fines from year to year in accordance with its demands.

It has become obvious that merely sounding the alarm is not enough. The inspectors should extend concrete practical assistance to producers. And for this purpose we must convert from the previous practice of the mechanical quality screening of finished articles, which does not require special mental effort and high professionalism, to forestalling defects and to analyzing their causes in all their totality. The current restructuring of the activity of USSR Gosstandart [State Committee for Standards] regional organs is aimed at seeing to it that each of their actions leads without fail to tangible advances in the improvement of quality at enterprises.

Of course, the basically new approach to output quality control requires such new methods and forms of operation of the standardization and metrology center. Previously, enterprises used to drop out of sight for long months, right up until the next round of inspections or some kind of extraordinary occurrence. Now, enterprises

that are not covered by state acceptance are assigned to a state inspector, that is, some form or other of state monitoring is present at all plants and factories.

### State Acceptance for the Best?

It is logical to suppose that state acceptance is necessary primarily where output quality is unimportant.

So we were surprised no end when it was introduced at the Voskresensk Association for Mineral Fertilizer Production—one of the best enterprises of its branch. And is state acceptance so necessary in Balashikha's Science and Production Association Kriogenmash, which produces output of the best world class and has always been distinguished by a high level of technology? Of course there is a shortage of advanced workers, and monitoring does not hurt it. But it is not cheap for the state. Is it not better to establish it where quality matters are actually in a neglected state, for example at the Kolomna Machine-Tool Building Plant and the Balashikha Truck-Crane Plant?

It must be acknowledged that state-inspection forces are not sufficient to impose order at such enterprises. Thus, for example, at the Zaraysk Footwear Factory the quality-control section has such a complacent mood that it persistently does "not notice" violations of the GOST's [All- Union State Standards]. It is interesting that when our staffers accept finished output alongside factory inspectors, the share of first-grade footwear drops sharply. As soon as we leave the enterprise, almost all the footwear is accepted as first grade! This is where state acceptance is needed.

There is much in common in the activities of state acceptance and state inspection. Thus, both we and state acceptance try to keep in closer contact with the enterprises' suppliers: for the quality of the articles often depends upon the quality of the outfitting. Monitoring should be conducted in earnest not just of the technology, but it should start with the technical documentation, since the technical level of the product has already been set at this stage.

Unfortunately, the share of yesterday's products is still high among the articles being produced. Moreover, these products have been included in state orders. Formally, this is the concern of the collectives themselves and their ministries. And it remains for us just to record the facts. But we consider it our duty to render assistance to the enterprises in raising the output's technical level.

We have, in particular, created a certification and testing section. We attribute paramount importance to the inspection of a product's precertification readiness. And primarily for output that lays claim to the State Emblem of Quality. One must be assured not only that the

article's design is actually good but also that the enterprise is capable (in its technical level of production and its organization) of insuring the series output of products with the declared quality parameters.

However, it is not right to think that we just copy the activity of outside monitoring. There is a potential inherent only in regional organs. We can, let us say, include in our sphere of influence the whole path of an article which is the subject of cooperation for our zone's enterprises.

Thus, while present during the construction of apartment houses, we have encountered numerous complaints about the quality of bathroom boxes. These were fabricated at the Shchurov Construction-Parts Combine. When we began to examine them carefully it turned out that even the requirements for design of the cabins had not been stipulated accurately in the technical documentation. As a result, the builders had to make them over at times. We invited to the center representatives of all the organizations that had any relationship to manufacture of the boxes, including the main administration Mosobstrostoymaterialy [Main Administration of Moscow Oblast for Building Materials]. We drew up a plan for joint measures. And it was resolved firmly to achieve them as quickly as possible.

#### **Hand in Hand with the Party Committee**

But practical experience convinces us that success in the drive for quality depends directly upon the party organization's policy. We monitor more than 300 production enterprises. But only a few party organizations responded to a call for collaboration. Many party workers consider the quality problem purely one of production. And in personal conversations it was said with surprise: "We applied economic sanctions, and the plant paid the fines. What else do you want?"

We want each communist to understand that improvement of quality is a task for whose solution he is personally responsible. Only then will there be tangible progress.

City party organizations had a different attitude toward collaboration with us.

The Lyubertsy city party organization took quality seriously. Starting with the fact that the city gorkom buro and First Secretary V. Mikhaylov examined the results of inspections of the area's enterprises that were undertaken by the center.

The supervisors of the machinebuilding plant for trading machinery, the Agricultural Machinebuilding Plant imeni Ukhtomskiy, and the carpet association have had a hard time of it. This is the crux of it basically: the city committee for people's control was charged with monitoring fulfillment of the decisions adopted, not by the number of plant measures taken but by their results.

Analysis of the data of state inspection is entering increasingly widely into the practice also of the Kolomna CPSU gorkom. Not so long ago, for example, the buro heard a matter about the operation of the housing-construction combine. But still, I consider that the party organization of the city where the Center for Standardization and Metrology is located could use its staff workers more often for various consultations and for surprise quality inspections.

As for the party organizations of other cities which are in the zone of our action, they remain silent. Although we report to them the worrisome results of each inspection.

#### **The Honor of the Uniform Must Be Saved**

I say frankly that the requirements set by the times have turned out to be not within the capabilities of our center's workers. The years when the objective information of state inspection was not "in demand" and principled inspectors were subjected to undisguised pressure have been telling. As a result, they lost professionalism, and others did not succeed in acquiring it. Lack of initiative was implanted, and such "talents" as skill in adjusting the conclusions for those who would want to receive them were raised in value. Gradually the workers' scale of values itself shifted.

All this created a soil that was favorable for conflicts and squabbling, which somehow all at once broke out externally. How does one work in such an atmosphere?

The newly elected party buro recommended that a social certification of the supervisory staff be conducted, beginning with the center's director. Speaking straight from the shoulder, I did not expect such help in that extreme situation. And only later did I understand that that solution was the only correct one. And then I decided that I would return to the director's office, which I opened up for secret voting, just in case the collective itself considered this necessary.

At first the referendum's results were heartening: 80 percent expressed confidence in the director. But then something else came to mind: how much more must be done in order to change myself, my attitudes toward people and relationships with people in order to deserve the support of the whole collective.

It is curious that the characteristics that could appear flattering to me were, as a rule, anonymous, and the other way around. But even the most personally unfavorable were, with rare exception, good natured and were prompted by a sincere striving to set up a normal situation for the collective as quickly as possible.

I had noted long ago: when people see that their work is needed, they work with initiative, with doubled energy. For example, Yu. Paykova answers for the Kolomenskiy zavod Association, where diesel locomotives are produced. The enterprise's suppliers are letting it down.

Yu. Paykova, together with the plant's workers, repeatedly appealed to Penzdizelmash Association. And they achieved their goals: the diesel turbocompressors that arrive from Penza have become appreciably better. M. Mironov and N. Fokin, our principal inspectors who know how to stand up for their point of view, are well known at the region's enterprises.

These are our veterans, and they have for many years done much work to keep defects as few as possible.

A correct evaluation of the contribution of each worker toward the common goal means much for a normal atmosphere in a collective. However, since ancient times the centers have been differentiated by wage group on the basis of inspection quality. Here it turns out that we are facing a dilemma: whether to turn the "shaft" of inspection, or whether to increase the effectiveness of surveillance, in each case digging down to the primary causes of defects. It would seem that it would be much wiser to consider also the labor intensiveness of the inspections and the effectiveness thereof.

Efforts were made to make a more correct payment through bonuses. But...they collided with the Statute on Awarding Bonuses to Workers of the Standardization and Metrology Center and State-Surveillance Laboratories for Standards and Measuring Equipment of USSR Gosstandart, which was adopted 10 years ago. The statute prohibits revision of more than a fourth of the total of a percentage of bonuses that are equal for all. How to put an end to wage leveling?

Yes, we have had many changes in the last year to year and a half. People are becoming impatient with everything that sullies the name of the standardization-center's workers. In particular, we must ourselves tighten up our technique at work, which is contentious in nature but nevertheless requires not only special professional but also character qualities.

I think that, in using the concept "honor of the uniform," we forget at times also about its true meaning, about the fact that a person is obligated under all circumstances to conduct himself in a way that will not cause harm and to hold high his professional worth.

11409

## PLANNING, PLAN IMPLEMENTATION

### Gosplan Collegium Discusses Long-Range Development Plans

18200192 Moscow *PLANOVYE KHOZYAYSTVO* in Russian No 5, May 88 (signed to press 20 Apr 88) pp 123-125

[Article: "In USSR Gosplan"]

[Text] USSR Gosplan's Collegium discussed at a number of sessions during the first quarter of 1988 problems of preparing documents about the prospects for the

country's economic and social development and some basic problems in developing a draft of the 1989 plan, based on the requirements of the USSR Law on the State Enterprise, the decrees of the February 1988 CPSU Central Committee Plenum, and other decisions of authoritative organs on radical restructuring for controlling the economy. Adopted for continuing guidance and execution were the speech of CPSU Central Committee General Secretary M. S. Gorbachev, "Revolutionary Restructuring Is the Ideology of Renewal," at the February 1988 CPSU Central Committee Plenum and the plenum's decree as concrete programs for ideological support for restructuring Soviet society and for executing radical economic reform and for improving fundamentally the activity of all elements of the educational complex—one of the decisive prerequisites for dynamic social, economic and ethical progress. The USSR Gosplan tasks that ensue from these documents were examined.

The decisions of the February 1988 CPSU Central Committee Plenum call for a restructuring of public education, the presentation of new requirements for planning the development of education and for reequipping it, and for financing and creating a strong materials base for the whole educational system. The Collegium charged Deputy USSR Gosplan Chairmen, collegium members, and chiefs of sections with calling for, in state plan drafts, the timely and full execution of measures for realizing these decisions, plus the recommendations and observations that were contained in the speeches of CPSU Central Committee Plenum participants.

The appropriate complexes and sections of USSR Gosplan were charged, jointly with the USSR Council of Ministers' Buro for Social Development and with USSR Minfin [Ministry of Finance], with preparing and presenting recommendations on additional measures for developing the material base for education, for reequipping it, and for increasing considerably state appropriations for the development of scientific research in the higher school.

The Section for Education, Culture and Public Health was charged with developing in 1988 recommendations on the procedure for making up a draft plan for the 13th Five-Year Plan for the training of specialists with higher and intermediate special education and for their distribution in an era of wide introduction of economically accountable contractual relations between educational institutions and enterprises (or associations).

In January 1988 the Collegium examined baseline indicators for developing drafts of comprehensive programs for qualitative improvement of the foodstuffs supply for people of the Union republics during 1991-2000. The work of the commission that USSR Gosplan formed, jointly with USSR Gosagroprom [State Agroindustrial

Committee], for the preparation and substantiation of calculations of the people's foodstuffs requirements, based upon rational consumption norms, was given a positive evaluation.

At the same time, the Collegium directed that the baseline indicators for the effectiveness of agricultural production and of capital investment that are adopted when developing drafts of comprehensive programs for improving qualitatively the foodstuffs supply for peoples of the Union republics during 1991-2000 be radically reviewed and brought up to the level needed for converting the agroindustrial complex to a path of intensive development and that they correspond strictly with the calculations for the draft of the Concept for Economic and Social Development of the USSR for the Period up to the Year 2005. USSR Gosplan's agroindustrial complex should present the refined papers simultaneously with the draft of the Concept for Developing the Agroindustrial Complex During the Period up to the Year 2005.

At the start of March 1988 the draft of this Concept was discussed and so were the refined baseline data for developing drafts for comprehensive programs for qualitative improvement of the foodstuffs supply for peoples of the Union republics for 1991-2000. The most important indicators of these drafts were accepted as the basis for later work. It was determined that refinement of the drafts should be based upon long-term goals for sharply improving provisioning of the country's population with foodstuffs and other consumer goods and for fully satisfying the economy's demands for APK [agroindustrial complex] products. It was recommended that, based upon the conversion of APK branches to an advanced industrialized base and to an intensive technology, and through the wide introduction of the new management mechanism, those scientifically substantiated volumes and structures of production, purchases and deliveries of the complex's output, and also the principal paths and means for achieving them which would enable the qualitative indicators for APK development to come up to the world level, be established.

The Collegium examined the draft of the Statute on State Orders for 1989-1990 and recommended its adoption as the basis for further work. It was directed that the following problems also be examined during refinement of the draft and that they be reflected in it:

—definition of the concept of the state order as a new economic-planning category since promulgation of the Law on the State Enterprise (or Association);

—criteria for including in state orders the most important productive capacity, facilities of the social sphere, types of output, and operations, services and scientific developments;

—the place of state orders in state plans;

—overall relationships between state orders and direct economic ties, based upon agreements;

—the creation of incentives for obtaining state orders;

—the placement of state orders on a competitive basis; and

—principles of the support of state orders and the entire amount of production of output (and performance of operations and services) with the necessary supply, equipment and other resources.

The Collegium recommended that the revised draft of the Resolution be discussed by the Economic Council and the Commission for the Improvement of Control, Planning and the Economic Mechanism and it charged USSR Gosplan Deputy Chairmen—the supervisors of the complexes, taking this draft into account—with developing a preliminary state-orders staff, by appropriate Gosplan complex, for drafting up the State Plan for the Economic and Social Development of the USSR in 1989, and, taking one of the ministries as an example, with preparing the draft for the state order for 1989 and with determining its share in the total amount of production of output (and performance of operations and services) in terms of cost.

The Collegium examined and adopted as a basis for further work the recommendations prepared by the Consolidated Section for National Economic Planning, jointly with other sections and the GVTs [Main Computer Center], as to the makeup of the indicators and unified forms for the development and submission of draft plans for 1989 and 1990 and the grounds for these draft plans to USSR Gosplan by USSR ministries and agencies and Union republic councils of ministers. The recommendations call for a substantial reduction in the computational information presented, in accordance with the Law on the State Enterprise (or Association) and the conversion of enterprises to full economic accountability and self-financing.

In refining the indicated indicators and forms and in preparing the draft of the USSR Gosplan decree on said question, and also in reproducing and distributing the forms, it is recognized that it is necessary:

—not to allow the requirement of computational information that is not directly connected with development of the state plan draft, or of the indicators that regulate the current-plan activity of economic elements, with a view to avoiding repetition of the errors that occurred during coordination of the state order for the ministries for 1988;

—to eliminate excessive duplication of information, primarily of indicators that are contained in the various forms, and also of those indicators that can be obtained on the basis of information presented in these forms and of the data of existing state statistical reporting;

—to specify that the draft of the indicated decree contain requirements that will prevent USSR ministries and agencies and Union republic councils of ministers from obtaining from subordinate enterprises and organizations, when they develop draft plans, indicators that do not correspond to the terms of the new economic mechanism and the statutes on radical reform for controlling the economy; and

—to provide for precise differentiation of the forms applicable to the various levels of control, and to call for their refinement strictly in accordance with what is appropriate.

The Collegium charged the GVTs with preparing in the second quarter of 1988 recommendations for the formation, based on the data of USSR Goskomstat [State Committee for Statistics] and on information that exists in the ASU's [automated control systems] of USSR ministries and departments, of the reporting systems and plan indicators that are required for developing draft plans under the new management terms.

After discussing the articles of D. Valovoy, V. Parfenov, V. Kabaidze, V. Selyunin, L. Abalkin, I. Davydova and R. Belousov which were published in January-February 1988 in the newspapers PRAVDA, SOTSIALISTICHESKAYA INDUSTRIYA and IZVESTIYA and the magazine OGONEK, the USSR Gosplan Collegium noted that their authors had posed timely questions of further improving measuring sticks for production volume and the rate of its growth, and of providing, through an effective system of indicators, for structural improvement in the economy, for acceleration in the development of consumer-goods production and of a material base for the social sphere, and for the saving of resources, as well as for unconditional observance at all levels of control of the requirements of the Law on the State Enterprise (or Association) when developing draft plans.

The Collegium charged the Deputy Chairmen of USSR Gosplan, members of the Collegium, and chiefs of sections with examining the recommendations for improving the new management methods that are contained in articles published in the press, during the preparation of calculations for the long term and of the draft of the plan for 1989, and also during development of the Statute on the State Order and the concept for the forming of economic standards for the 13th Five-Year Plan.

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## INDUSTRIAL DEVELOPMENT, PERFORMANCE

### Goskomstat Chairman Interviewed on Industrial Growth

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[Interview with M. Korolev, chairman of the USSR Goskomstat, by G. Dolgov, commentator: "Statistics and Economics"]

[Text] [Question] They say that figures are a mirror of the economy. If we look into this mirror what results will we see from the first 2 years of the five-year plan? How has the "reflection" itself changed? What has appeared in it that is new, previously unknown or, perhaps, still unfamiliar to us?

[Answer] First of all we see evidence of further development of the country's economy. We see changes that are taking place in all spheres of social life today.

I shall say at the outset that the "reflection" is not always "rosy." It includes much that is good but there is also that which we do not like very much. I shall begin with the good. Thus in industry we are providing for fulfillment of assignments for the growth rates of the overall volume of production. Agriculture is on the path of stable development, especially animal husbandry. We have concentrated funds on reequipping the production potential. The economic mechanism is being improved in the various branches of the national economy. The influence of intensive factors is increasing. But this process is developing in various ways in various branches.

The gross national product has increased by 8 percent in 2 years. This indicator, calculated according to the UN method, reflects the overall sum of income of all enterprises, organizations and the population in the production and nonproduction spheres.

The produced national income increased by 6.5 percent and the productivity of public labor—by 6.3 percent. The increase in real per capita incomes amounted to 4.6 percent. In 1985, 92 percent of the increase in national income was achieved as a result of the growth of the productivity of public labor, in 1986, 94 percent, and in 1987, 100 percent. This was achieved for the first time in industry, even with the reduction of the number of workers, that is, one of the most important tasks of the 12th Five-Year Plan is being realized.

In 2 years more than a million people were released as a result of reducing the application of manual labor.

New forms of labor have appeared—interbranch scientific complexes, state industrial associations, and agroindustrial associations.

Measures for raising the level of utilization of the production potential mainly as a result of changing over to two- and three-shift operations made it possible to slow down the rates of reduction of the output-capital ratio.

If one compares the beginning of the 12th Five-Year Plan with the same period of the 11th Five-Year Plan one can see that the five-year plan is working more and more completely toward acceleration. Judge for yourself. In order to produce the volume of industrial output of this period of the five-year plan, under the current conditions it would take 4 months less. But quantitative growth, of course, is not the only important thing. Today we undoubtedly have new quantitative aspects as well. We have produced twice as many machine tools with numerical program control as we did during the same period of the 11th Five-Year Plan and the production of industrial robots has increased by a factor of more than 4. Here one sees the reflection of the policy for technical reequipment and reconstruction of the national economy which we earmarked as the major direction for renewal of the material and technical base of the society. And capital investments for these purposes have increased by a factor of 1.7 as compared to the corresponding period of the 11th Five-Year Plan. The introduction of fixed capital from state capital investments has increased by 58.8 billion rubles or 22 percent. We have assimilated 69.9 billion rubles more or 26 percent more capital investments.

At the same time certain branches of the national economy have not been able to fulfill the plans they have earmarked. The most alarming situation developed in the machine-building complex. The increase in the overall volume of production during 1978 lagged behind the assignment by a factor of 1.3. Contractual discipline deteriorated. The complex turned out to be unprepared for the high assignments of the five-year plan and the requirements of state acceptance.

We are also behind in the implementation of the Comprehensive Program for the Development of the Production of Consumer Goods and the Sphere of Services. We are not fulfilling assignments for the production of certain kinds of fabrics, knitted items, footwear, radio and television equipment, and household appliances.

When it comes to the agroindustrial complex the picture here is more optimistic. The new economic conditions for management, the introduction of progressive forms of organization and stimulation of labor, and the application of intensive technologies have made it possible during the past period for enterprises and organizations of the complex to increase volumes and also the growth rates of the production of products. Grain production amounted to an average of more than 210 million tons a year, potatoes—81.5, meat—18.3, and milk—102.8 million tons, and eggs—81.4 billion.

I shall discuss in detail the fulfillment of the social program. Its implementation proceeded completely in keeping with the five-year plan. It was intended to increase wages. This happened. State expenditures for these purposes over 2 years amounted to more than 3 billion rubles. As a result, wages for teachers and other public education workers have already been increased. Today they are increasing wages for workers in public health, social security, and higher educational institutions. The average monthly monetary earnings of workers and employees has reached 200 rubles, and kolkhoz workers in the public economy—167 rubles.

Payments and benefits from public consumption funds continued to increase. In 1987 their total reached 162.5 billion rubles. This amounts to 575 rubles per capita (incidentally, in 1985 the figure was 45 rubles less).

Wages, payments, and benefits increased. Naturally, the effective demand of the population increased as well. But we did not manage to satisfy it fully. Mainly because of the failure to fulfill planned assignments for retail commodity turnover and paid services.

At the same time we must note a certain improvement in the structure of commodity turnover itself, which was promoted by measures conducted consistently for fighting against drunkenness and alcoholism.

During the 2 years of the five-year plan there was a significant increase in the volumes of capital investments in housing construction. In 1987 32.6 billion rubles were spent for this purpose. For comparison I wish to note that under the 11th Five-Year Plan the average annual expenditures on housing construction amounted to 25.5 billion rubles.

During 1986-1987 residential buildings with an overall area of 249.5 million square meters were constructed in the country. The assignment of the five-year plan was exceeded with respect to this indicator by 5 million square meters. In 1987 alone housing conditions were improved for more than 11 million people.

The network of state preschool institutions continued to develop. Last year, for example, there were 17 million children in them. But I must say at once that there was not enough space.

The picture is approximately the same in public health. During 2 years of the five-year plan the capacities of outpatient polyclinic institutions increased by 7 percent, and the number of hospital beds—by 3 percent. Still one must say that today the provision of places for the population in hospitals and especially polyclinics is less than the established normative.

Our policy of improving the society, the economy, and the social climate is reflected in the demographic indicators. During this period 5.6 million children were born annually, which is more than in any other postwar year.

The death rate has dropped. During 1986-1987 on an average 200,000 people less died than in 1984, and the death rate of able-bodied men from accidents decreased by 37 percent. And as a result of this the average lifespan of the population increased by almost 2 years (for men—2.6 years) and amounted to 69.6 years.

**[Question] The 12th Five-Year Plan was difficult. It was planned according to old measures and criteria but even during the course of it absolutely new economic mechanisms appeared. Naturally there could have been certain contradictions and a lack of correspondence between the plans and the capabilities. What paths do you see for optimizing the plans?**

**[Answer]** The difficulty of the 12th Five-Year Plan is determined primarily by the difficulty of the tasks that our economy will have to carry out during these years—a qualitative transformation of material production on the basis of the achievements of scientific and technical progress, a radical rearrangement of the structure and investment policy, and a radical reform of the entire economic mechanism.

The development and introduction of the USSR Law on the State Enterprise and the conditions for management according to principles of complete cost accounting not only do not contradict that basic tasks of the five-year plan but are a direct constituent part of these tasks. The process of changing branches of the national economy over to operation under the new conditions is being carried out in a planned way and is constantly being supervised by the Commission for Improving Management, Planning, and the Economic Mechanism.

At the same time there arise certain problems having to do with the correspondence between the new principles of management and the existing system of management of the national economy, normative methods and the assignment set for the five-year plan. In a number of cases they are manifested fairly keenly at the level of the enterprise. Here it is necessary to take into account that 1988 and subsequent years of the 12th Five-Year Plan are transitional in nature—from mainly administrative

methods to economic methods of management. In my view the main problem is not in the opposition between the five-year plan and the new management conditions, but in making maximum use of economic levers and stimuli in order to provide for its unconditional fulfillment.

During the process of implementing the State Plans for Economic and Social Development of the USSR centralized management of the economy should be concentrated primarily on providing for national economic proportions, fulfilling general economic indicators, and achieving balanced production and social development of all spheres and branches of the national economy.

It should be said that one of the important problems is to develop a system of evaluation indicators that is adequate to new management conditions.

As concerns associations and enterprises, the law determines: the fulfillment of state orders and commitments for deliveries of products is the most important criterion for evaluating the activity of enterprises and the economic encouragement for the collectives.

This also predetermines the composition of the system of indicators for evaluating the macrolevel—the fulfillment of the state order on contractual discipline, and also economic indicators—initial data for developing plans that reflect social needs for products, the balance of plans as the production of products (jobs, services) in value terms, profit, and several others. For the various union republics one should undoubtedly include among the evaluation indicators the growth of the national income in the production of consumer goods.

I should especially like to emphasize the fact that the system for evaluation at the macrolevel pertains only to national economic complexes, ministries and departments, and should not be tailored for the enterprises.

The statistical accountability envisioned by the USSR Goskomstat, taking into account the new requirements, makes it possible to obtain all the necessary information concerning the operation of the national economy.

Table 1—Scale of Growth of USSR Economy

|  | 1981-1982 | 1986-1987 |
|--|-----------|-----------|
| Industrial output (in comparable prices, billions of rubles)                           | 1398      | 1709      |
| Electric energy, billions of kilowatt hours  | 2693      | 3264      |
| Petroleum, including gas condensate, millions of tons                                  | 1221      | 1239      |
| Natural gas, billions of cubic meters  | 966       | 1413      |
| Coal, millions of tons   | 1422      | 1511      |
| Steel, millions of tons  | 296       | 322       |
| Rolled ferrous metals (prepared), millions of tons                                     | 205       | 226       |
| Mineral fertilizers (translated to 100 percent nutritive substances), millions of tons | 52.7      | 71.1      |
| Paper, millions of tons  | 10.7      | 12.3      |
| All kinds of fabrics, billions of square meters  | 22.0      | 25.0      |
| Footwear, millions of pair   | 1472      | 1605      |

Table 1—Scale of Growth of USSR Economy

|   | 1981-1982 | 1986-1987 |
|---|-----------|-----------|
| Gross agricultural output (in comparable prices), billions of rubles                                | 190.8     | 219.9     |
| Grain, millions of tons   | 172.5     | 210.7     |
| Meat (in slaughtered weight), millions of tons  | 15.3      | 18.3      |
| Milk, millions of tons  | 90.0      | 102.8     |
| Eggs, billions  | 71.6      | 81.4      |
| Wool (in physical weight), thousands of tons  | 456       | 462       |
| Startup of fixed capital (in comparable prices), billions of rubles                                 | 306.6     | 375.5     |
| Startup of:   |           |           |
| Residential buildings, millions of square meters of overall space                                   | 214.3     | 249.6     |
| Preschool institutions, thousands of places for students  | 1111.3    | 1316.1    |
| Hospital institutions, thousands of beds  | 125.7     | 147.8     |
| Outpatient polyclinic institutions, thousands of visits per shift                                   | 266.8     | 379.3     |
| General educational schools, thousands of places for students                                       | 2100.3    | 2678.2    |
| Capital investments (in comparable prices), billions of rubles                                      | 318.4     | 399.1     |
| Dispatch of cargo by all kinds of transportation, billions of tons                                  | 62.6      | 66.6      |
| Retail commodity turnover of state and cooperative trade (in comparable prices), billions of rubles | 639.9     | 677.0     |

It seems that changing enterprises and associations over to the new management conditions and putting the USSR Law on the State Enterprise into effect require as never before an efficient system of organization of planning at enterprises that provides for their unconditional fulfillment of contractual commitments, normal work of the consumers, and efficient utilization of existing production capacities and resources, as well as extending the principles of complete cost accounting to every work position.

[Question] Not so long ago statistical agencies gathered and analyzed a large quantity of the most diverse data. Then there was a certain ordering of information which had to be processed by the statistical service. What principle was used to select the data that are necessary today? What do you consider to be the main and basic thing in the activity of statistical services?

[Answer] This question is closely linked to the preceding one. The main thing in the activity of statistical agencies is to keep up with the crucial events and to reflect objectively the existing situation in the country, in all of its regions, and in all of the branches of the national economy, the processes that are taking place, and the course of fulfillment of the plans.

At the present time one of the major areas in the activity of statistical services should be continuous study of the course of restructuring, the results of the radical reform that is being conducted in economic management, and its economic and social consequences. Statistical data must help to implement principally new approaches to the evaluation of the economic activity of the enterprises under the new conditions.

Recently order has been imposed in statistical reporting in the direction of providing for the introduction of the law, the operation of enterprises under the new management conditions, and effective observance of the realization of the basic priorities and goals of the country's socioeconomic development under the conditions of the radical restructuring of the economic mechanism and the management of the economy. In this connection, taking into account the changes that have been made in the policy for national economic planning for 1984, we have revised the indicators that provide for monitoring the course of the fulfillment of the State Plan for the Economic and Social Development of the USSR, particularly the fulfillment of the state order for the delivery of products, the startup of production capacities and facilities of the social-cultural sphere, and also the fulfillment of planned assignments by enterprises and associations under the new management conditions.

We have improved statistical information concerning the activity of enterprises and associations that have been changed over to complete cost accounting and self-financing that characterize the condition of accounts with the budget, the deduction of money for the formation of centralized funds, and the movement of economic incentive funds for the enterprises and associations. We have established statistical observation of the work of enterprises and associations but apply both models of cost accounting, based both on normative distribution of profit and on normative distribution of income received after reimbursement from the receipts of material expenditures.

Table 2—Growth Rates for the Most Important Indicators of the Economic and Social Development of the USSR (in percentages calculated from the actual base)

|   | 1987 in of 1985 |
|---|-----------------|
| Produced national income                              | 6.5             |
| National income used for acquisition and accumulation | 4.8             |
| Productivity of public labor                          | 6.3             |
| Industrial output                                     | 8.9             |
| Agricultural output                                   | 9.2             |
| Introduction of fixed capital from state funds        | 20              |
| Assimilation of state capital investments             | 24              |
| Dispatch of cargo by general purpose transportation   | 6.3             |
| Foreign trade turnover                                | -9.9            |
| Retail commodity turnover (in actual prices)          | 5.3             |
| Paid services to the population                       | 19.1            |
| Real per capita income                                | 4.6             |
| Introduced through state capital investments:         |                 |
| residential buildings                                 | 13              |
| general educational schools                           | 28              |
| vocational and technical schools                      | 20              |
| preschool institutions                                | 30              |
| hospitals   | 20              |
| outpatient polyclinic institutions                    | 49              |

Additionally, we have developed and introduced into statistical reporting indicators of the activity of foreign trade associations, firms, and enterprises that have been given the right to carry out foreign trade operations independently, and also indicators that characterize the process of international specialization and cooperation in production with the reflection of the issues of realizing the comprehensive program for scientific and technical progress. We have improved the system of reporting on the delivery of goods for export, the development of direct production ties of enterprises and organizations of the USSR with enterprises and organizations of the CEMA countries, the supply of consumers with the most important kinds of resources under the conditions of the restructuring of the system of material and technical supplies for the national economy, and the changeover to wholesale trade in means of production both through direct ties between supplies and consumers and through cost accounting wholesale bases. We have provided for statistical analysis of the course of the conclusion of agreements for the delivery of products and the fulfillment of contractual commitments.

The imposition of order in reporting is also directed toward fighting against bureaucratism and reducing reporting that impedes the realization of the rights of enterprises and hampers their initiative.

I wish to give a couple of figures. During the course of the work for the critical revision of all forms of statistical reporting we completely abolished about 800 forms and reduced the number of one-time reports and investigations. The volume of statistical reporting for 1988 is 23 percent less than for 1987, and less than 1985 by a factor of almost 5.

This work was conducted with the participation of enterprises, ministries, and departments.

[Question] Just at first glance, statistics seem to be a passionless way of accounting. But in fact they can like some things more, simply not notice some things, and transform certain facts in their tables in the most advantageous and convenient way. This pertains particularly to comparison with 1913 and so forth. Do sympathy and antipathy remain in statistics today?

[Answer] They remain if you have in mind the emotional aspect of our work.

Well, of course, there are the traditional indicators, the well-worn topics, the developed questions and technologies for gathering and processing data. And in areas where there is not enough information there is no confidence. In statistics, as in any other activity where it is necessary to deal with the preparation and analysis of data, of course, we have our own sympathies and antipathies. For example, from a purely human perspective it is pleasant for me when I see good figures that tell of the results of work or achievements in one or another area of the country's economic or social development. And the consumers of consolidated statistical information also have different attitudes toward the various indicators. The attitudes of various consumers toward one and the same indicator are far from always the same.

As concerns our attitudes on the job toward data and figures, here the professional statistician should be absolutely effective. To be objective and reliable is one of the most important principles of statistics. This, if you will, is the law of our profession, the most important law.

How are these combined? I shall give one example for clarity. Almost every phenomenon in our life can frequently be presented from various viewpoints. It is good to see only certain factors, say, the positive ones, to bring them into the foreground and to devote less attention to certain others, for example, negative ones. Thus for a long time we published figures to the effect that the USSR occupies first place in the world with respect to the position of physicians and hospital beds for the population. The fact is absolutely objective. But behind this good indicators, within it, as it were, concealed in the shadows is another, absolutely different phenomenon—the unsatisfactory quality of the medical aid offered to the population. This problem is one of the most crucial ones today.

I am convinced that objective statistics should reflect all phenomena comprehensively, both the positive qualities and the negative ones if they exist. Today we are setting for ourselves the task of not allowing any division into advantageous and disadvantageous subjects and tables. Everything must be given objectively.

Now about comparison with 1939. It is no accident that this was the year of the greatest development of prerevolutionary Russia. And the statistics help us to learn the history of our country in quantitative terms. But we must take into account that the majority of today's population was born after the October Revolution. And I assume it is interesting for them to know where they begin, what kind of base preceded the creation of the new society. It is another matter to become so taken up by these comparisons that one does not see behind the figures of immense growth rates those negative phenomena which still exist in our country. And in general you are right; it is necessary to weigh these comparisons better and to reflect modern phenomena more.

At the same time this is an example of different perceptions of the same indicator. Some people do not like comparisons with 1913, but there are also many people (and I am one of them) who do like this comparison.

**[Question] Statistics are frequently oriented toward average figures. For example, the average earnings of the worker or employee or the per capita income of the average resident of the country. But it is also necessary to take into account highly paid citizens and pensioners with large stipends, and so forth. Do the average figures provide an objective picture?**

**[Answer]** It is true that statistics study the totality of mass processes and phenomena, each of which individually has its own inherent parameters that are peculiar only to it. And, naturally, it is possible to characterize any more general phenomena on the whole only with the help of generalizing indicators, including average figures. This average, of course, gives a certain general characteristic of the entire phenomenon that comprises particular, concrete amounts.

All this pertains fully to such indicators as the average lifespan, the average size of the family, the average earnings, the average per capita total income, the average per capita consumption of food products, and so forth. But statistics always warn of the need for caution in utilizing averages. Above all it is necessary to meet the conditions for the correctness of their application.

Averages can be applied only with a sufficiently large mass of data. It is necessary to maintain the structure of the phenomenon while establishing groups for which the averages are calculated. In addition to the average the user should be informed of other indicators that characterize distribution: deviations, framework, parameters of "minimum" and "maximum" groups, and so forth.

And in general the averages are far from the only indicators of statistics and it is necessary to make more extensive use of the entire arsenal of means that characterize the structure and dynamics of the phenomenon. Although the average amounts are generalized, they

cannot fully characterize any one phenomenon. For these purposes in statistics and analysis of data it is necessary to apply the method of various groupings.

I shall give this example: it is known that the average provision of dwelling space for one resident of the country is 10.3 square meters. At the same time data from a selective investigation of 310,000 families in 1984 showed that 30 percent of the families had less than 7 square meters per one person and 12 percent of the families had more than 15 square meters.

This is the kind of variegated picture that is formed when statistics begins to augment the average indicator with in-depth data that characterize the phenomenon more fully. Only with this approach is it possible to get an idea of the real state of things. Therefore while utilizing average indicators we must also investigate their dynamics in various groups of the population (or, say, enterprises if we are dealing with production data). Then one achieves a more realistic picture.

But even the average indicators themselves are quite workable and in a number of cases they serve the national economy faithfully and truly. For example, data concerning the average wages are absolutely necessary for analysis and calculation of the economic activity of enterprises, institutions, organizations, and ministries.

The average monthly earnings of workers and employees in the national economy as a whole in 1987 amounted to 201 rubles. Of course this does not mean that every worker receives precisely this wage. For every third worker, for example, the level of wages is higher than the average. The USSR Goskomstat regularly studies the level of wages in individual occupations and positions. For example, for steel smelters, operators for underground repair of wells and extraction of petroleum and gas, bulldozer and excavator operators and other highly skilled workers, it is more than 300 rubles. At the same time more than 6 million people receive earnings of up to 80 rubles a month—these are mainly part-time workers who do not work a complete day or a complete week, or students and piece-rate workers who do not fulfill the output norms.

While statistics devotes a great deal of attention to the study of wages in various branches of the national economy. Thus the average wages of workers and employees in industry are 220 rubles, in the fuel industry—320 rubles, in light industry—175 rubles, in construction—250 rubles, and in transportation—240 rubles. It is no less important to study the territorial differences in the wage level. Thus a worker in the same profession with the same level of qualifications who is working in the European part of our country earns barely half as much as an analogous worker in the North.

**[Question] Your work is based on confidence in the enterprises. After all, they supply all the necessary data. But if one enterprise or another wishes to embellish his**

**operation somewhat and submits figures that do not altogether correspond to the true state of affairs, will they still be taken into account? Or are there some reliable forms of verifying the data that are received?**

[Answer] Our statistics are based on all-encompassing accounting and accountability of all businesses for the results of their activity, which provides for the most complete and precise accounting for all statistical indicators that characterize the country's socioeconomic development.

In order to ensure the necessary quality of information, statistical services regularly monitor the condition of accounting and accountability and the reliability of report data for the various enterprises, associations, kolkhozes, and for all branches of the national economy. This work is conducted constantly and according to a plan, and initial accounting documents are inspected during the course of it. The verified indicators are considered in totality along with indicators for various other kinds of activity of the enterprise. The USSR Goskomstat in keeping with the established Provisions coordinates the work of financial, bank and control agencies for conducting verifications of the reliability of reported data.

It sometimes happens that during the course of the verifications cases of distortion in reporting are revealed, sometimes because of the neglected state of reporting itself and sometimes because of inadequate competence or elementary negligence on the part of the workers.

But one also finds intentional distortions of reports and exaggerated figures that are submitted by individual managers of enterprises, organizations, and kolkhozes, as well as other officials. This is done, as a rule, in order to create the appearance of well-being with respect to the fulfillment of the plan and sometimes also in order to obtain unearned income (wages and bonuses for work that has not been done and theft of raw and processed materials that have been written off supposedly for the production of products).

These cases are revealed both by workers of our services and by workers of other control organizations. Of course, we exclude these fabricated data from the reports and we hold their "authors" liable right down to the point of criminal punishment.

Today we encounter such phenomena less frequently. There were considerably more cases of writeups and distorted reports in the recent past. This slippery past was entered on by certain workers of party and state agencies who forced individual managers to exaggerate figures in order to give the appearance of success. These workers received their just punishment.

If one were to give a general evaluation of the reliability of consolidated report data one should emphasize: the total amount of deviations is such that it practically does not change the general indicators, tendencies, and proportions of our development.

[Question] At first glance it seems that figures are always objective, that they completely reflect the actual picture. How then does one explain the fact, for example, that we are producing more and more footwear in our country but the consumer leaves the store dissatisfied? Do your data not create the illusion of well-being at a time when things are far from wonderful?

[Answer] Here again one sees the peculiarities of generalization. More detailed information—in terms of the kinds, sizes, quality, and so forth—reveals the surplus in certain groups and shortage in others. The demand is always concrete and the figures concerning the satisfaction should be more varied and not limited to the overall production volume.

When publishing data concerning the increase in volumes of production of consumer goods, particularly the footwear you mentioned, the USSR Goskomstat does not conceal cases of poor-quality products being sent to trade. We have these data at our disposal and our press utilizes them extensively.

Our country actually does produce a lot of footwear, several hundred million pair. But the proportion of footwear that is in increased demand, for example, fashion footwear, insulated footwear, footwear for sports purposes and for active recreation are still in very short supply. And footwear in these groups comprises only 11-16 percent of the overall volume.

The saddest thing is that while there is a shortage of resources of footwear in trade, industry continues to produce items of outdated models and fashions. Last year the assortment of footwear was updated by less than one-third, which is a very low indicator. And its quality continues to be poor. Suffice it to say that wholesale bases of the trade ministries of the union republics last year rejected and reduced the quality category of almost 9 percent of the footwear that were inspected. Complaints were made about almost 13 million pair.

[Question] It is understandable that you receive data from state enterprises and institutions. But recently cooperatives have appeared in the country and they also produce goods and render services to the population. People have also begun to engage in individual labor activity. Do they also submit data concerning the production volume? Or do the statistics not take them into account? If so, does this not mean that the picture is incomplete?

[Answer] As soon as the cooperatives appeared we established forms for them for the corresponding statistical reporting. For example, for cooperatives for procuring and processing secondary raw material and also for

consumer services, there are monthly reports and for the rest—quarterly. Of course this reporting is extremely simplified. It contains basically only the indicator of the volume of output sold by the cooperative.

We are also conducting statistical control over the development of individual labor activity. A special form has been established for simple reporting. Previously the information about their activity was collected only from the results of the year, but beginning this year it will come in quarterly.

Of course we take into account the specific nature of their activity. We understand that neither the cooperative nor individual people engaging in individual labor activity are in a position to employ workers who would engage in accounting and reporting. Therefore we have introduced a special form for them which contains a small range of indicators. But this is quite enough to obtain the necessary information concerning the cooperative's activity, regardless of what it engages in, whether it produces consumer goods or renders services to the population, whether it operates in the sphere of trade or public catering.

**[Question]** If one looks attentively at the statistical collections one gets the impression that the material published in them are one-sided or tendentious. You report what is produced in the country and how much. But you say nothing about the extent to which these goods satisfy the demand or meet the needs of the population. For example, statistics report how many books are published in a year and in what volumes, but they say nothing about how many of them have been bought by the population and how many remain in the warehouses and in the stores. Is this normal?

**[Answer]** I cannot but agree with you. We have already discussed the reasons. The study of the demand for individual goods requires serious improvement and should be organized primarily by the manufacturing ministries and their organizations. Thus with the example that was given for books, data concerning their output should be completely at the disposal of the publishing house that obtains all the publications and produces a special statistical collection, and information about the dissemination, sale and so forth to be provided to the book trade administrations of the USSR Goskomizdat.

Today the USSR Goskomstat is conducting serious work to improve statistical publications. Our goal is to inform the population more extensively and completely concerning the country's economic and social development. A certain amount has already been done in this area. For example, we have considerably expanded the publication of data in the statistical collections "The USSR National Economy" and "The USSR in Figures" which were published last year. In subsequent collections we shall try to expand the data even more. In addition to these

collections we are offering to produce similar publications but for individual branches of the national economy, which will make it possible to increase the volume of information considerably.

Of course only the first steps have been taken in the matter of restructuring state statistical agencies for providing extensive publicity. There is still a good deal left to do.

Speaking of whether or not we have at our disposal data concerning the existence of unmarketable and abandoned goods, I must say that we do. Perhaps they are not as complete as they should be, but nonetheless these data exist. In any case, for example, we have already presented for the broad reading public a detailed picture of the volumes of unmarketable and abandoned goods produced by enterprises of the USSR Ministry of Light Industry.

**[Question]** This year many enterprises changed over to cost accounting and self-financing. Naturally, the summary indicators of their activity should also change. Are the statistical services ready for this? Will we not find the situation we encountered previously when enterprises already operating under the conditions of the experiment were forced to report in terms of the old parameters?

**[Answer]** In the first place I must say that all the assignments of the established five-year plan have been retained and, consequently, so have the corresponding indicators, which makes the collection, generalization, and evaluation of data more complicated.

But under the new management conditions, in keeping with the USSR Law on the State Enterprise, the main criterion for the activity of the enterprises is the fulfillment of state orders and the observance of contractual discipline for the delivery of products to the consumers. These are envisioned as the basic ones in statistical reporting as well. The program of consolidated development has been revised accordingly.

Of course there are difficulties here as well. With complete cost accounting and self-financing the financial indicators of activity become especially significant. But up to this point they have been collected and developed with considerable delay, which has seriously impeded their practical utilization when analyzing the operation of enterprises. Therefore this year for the first time in our practice the indicator of the financial result—profit or income—according to the totals for the period.

We understand the difficulty of the task and the need for accumulating experience in preliminary evaluation before bookkeeping reports are drawn up. But the positive experience of our colleagues from the socialist countries enables us to hope that the task is quite feasible.

When revising statistical reporting we considerably reduced the volume of information from branch and interbranch reports. Previously, for example, each month they collected data for the various indicators that characterize labor productivity. Now we shall receive these data only once a quarter. On the whole the volume of statistical reporting has been reduced by one-fourth as compared to last year.

Great difficulties arise when solving problems related to the establishment of reporting for enterprises that use the form for cost accounting that is based on normative distribution of income as distinct from normative distribution of profit which is more widespread in industry. We have to take into account the specific nature of their activity and somehow make adjustments in order to avoid "imposing" on them indicators that are unsuitable.

The work under the new management conditions has only just begun. During its course there will undoubtedly be improvements both in the economic mechanism itself and the system for managing it as well as in statistical reporting.

**[Question] To what extent do Soviet statistics correspond to the world level in this area of knowledge? Do you exchange experience with your foreign colleagues? Is Soviet experience of interest to them?**

**[Answer]** Statistics are a kind of service whose main consumers are management agencies. The higher the level of development of the economy the better the system of economic management and, consequently, also statistics should be. Their role and significance increase especially under the conditions of planned management. For operational planned management of the country's economy the USSR Goskomstat must gather, process and generalize information on the various oblasts, republics and the country as a whole the third day after the end of the report period. We are coping with this task.

Now a couple of words regarding the exchange of experience with foreign colleagues. We cooperate very actively with statistical agencies of the socialist countries both within the framework of the special permanent CEMA Commission and within the framework of bilateral cooperation. At the present time, for example, contacts are developing actively with the People's Republic of China. Through joint efforts of statisticians the CEMA countries have developed a unified system of indicators of balances of the national economy and the most important branches of the economy. We have developed a system of indicators of nonmaterial services which can be used in work for coordinating indicators of the system of national accounts and the balance of the national economy and for international comparisons of indicators of the national incomes of socialist and capitalist countries.

As we know, the CEMA Commission for Statistics five times a year makes international comparisons of the most important value indicators of the development of the national economies of the countries of the socialist community. We participate most actively in this work. Not to mention the fact, for example, that all calculation work is done at the Main Computer Center of the USSR Goskomstat.

A regular comparison of such indicators as produced national income, public labor productivity, the consumption and accumulation funds, the overall consumption of material goods and nonmaterial services by the population, capital investments, and the output from industry and agriculture makes it possible to expand and deepen the comparative analysis of the economies of the CEMA countries.

It should also be noted that the USSR Central Statistical Agency is a constant and unwavering participant in the work of UN statistical services. Naturally there is a constant exchange of concepts and methodological principles used in the USSR and the UN. The UN Statistical Service, for example, has adopted as an official document the balance of the national economy applied in the USSR and other socialist countries.

We have introduced into our statistical practice the indicator of the Gross National Product developed according to UN methodology. It should be noted that at meetings of the highest statistical agency of the UN—the Statistical Commission—delegates have repeatedly noted the advantages and the high level of development of state statistics in the USSR.

Of course we do not want to flatter ourselves with our own achievements. There are areas in which we still have a large amount of hard work to do. These include, in particular, extensive and efficient computerization of the collection, processing, and output of information. All we have done in this direction so far is to take the first steps on a long and difficult path. It is necessary to develop more extensively our activity in the statistical organizations of the UN, the EEC, and the CEMA.

**[Question] Throughout the world an immense quantity of statistical literature is published on various branches of knowledge: economics, science, culture, art. So far we have none of these publications. Incidentally, they are very popular among a wide range of readers abroad. How do you explain this fact? Does the Goskomstat want to conceal some data, does it not want to make it public? Or do the reasons for the small output of your department lie in the lack of modern technical equipment?**

**[Answer]** It is hard to find a simple answer to this question. We undoubtedly have problems related to the poor material and technical base. But the main thing lies elsewhere. For a long time we have not devoted attention to expanding the publicity of statistical information. It cannot be said that not enough data are published today.

Each year we publish mass additions of such large collections as "The USSR National Economy" and "The USSR in Figures," and the latter is published in four languages. Each quarter on the pages of central newspapers we publish information "On the Results of the Fulfillment of the State Plan for the Economic and Social Development of the USSR." General statistical materials are published monthly in the journal VESTNIK STATISTIKI, which are then published in a separate book. Similar statistical collections are produced annually by the committees for statistics of the union republics. The central newspapers very actively utilize the press publications that are sent to them daily by the Goskomstat. So we provide a good deal of information like this.

The content of these publications is another matter. Here we have something to work on. We wish for them to reflect first of all those problems with which our country is living now. In our opinion, there are two paths to enriching their content. First, it is necessary to provide broader information which even yesterday was utterly incomprehensible, and we are doing this: we are publishing data about the child death rate, wages in various occupations, certain materials from selective research, characteristics of the quality of goods and services. In the second place, it is also necessary to quantitatively expand our publications. Here too we are trying not to stand still. Suffice it to say that in 1988 we intend to publish such additional collections as "USSR Industry," "The USSR Population," "USSR Agriculture," "USSR Capital Construction," "Labor in the USSR" and so forth.

And one other thing. We are suggesting further development and expansion of operational information. We attach special significance to this area since operational information reaches the reader quickly, it does not have a chance to become outdated, and it answers the most critical questions of the day. We intend to prepare monthly surveys and bulletins.

**[Question] Statistics are the base for management of the national economy and serve as a basis for the adoption of important decisions. Were statistics to blame for the mistakes that have been made in our economy in past years?**

**[Answer]** Indeed, statistics play a large role in management of the national economy. And statistics have always tried to respond objectively to the demands of management agencies first of all. If there have been certain gaps in statistics they exist, as a rule, because of the fact that the proper data were not required for the management agencies and were not ordered by them.

And if the data were distorted, statistics have nothing to do with this because statistics are always objective. Figures are figures. They must reflect the real state of

affairs and if they are not taken "out of the sky" they perform their function completely. The question lies elsewhere: did certain people want to see the truly objective picture or not.

I must say honestly that it has happened in the past that this picture was presented incompletely and one-sidedly. The basic emphasis in publications was placed on positive results. Now our materials do not conceal the difficulties that exist.

I shall not speak about distortions in the reports. This is not statistics but corruption. I must note that our statistical service does not work beyond reproach yet. We also have large omissions and shortcomings. Today in a situation of extensive openness and democratization of the entire life of the society, there are absolutely real possibilities of eliminating our mistakes. We are working on this.

**[Question]** We know that the volume indicators of the operation of branches of the national economy do not objectively reflect the state of affairs in them. In particular, they do not give a precise idea of the growth of labor productivity or the output of items in physical terms. Prices are regularly increased and this creates the illusion of progress. But in fact not only qualitative indicators but also quantitative ones such, for example, as those in machine building, are lagging behind. Is it being suggested that the indicators be replaced with more objective ones that characterize precisely all processes taking place in the economy?

**[Answer]** Your question contains the assertion that there is a known lack of objectivity of value volume indicators. Without entering into a polemic I should still like to say that this is a matter not so much of the objectivity of one indicator or another as of the adequacy of the existing system of evaluation indicators (which, in my opinion, should include value indicators at the macro level as well (to the economic mechanism and the needs of management of the national economy).

As concerns the method for determining the dynamics of the development of production on the basis of the growth rates that is accepted today in Soviet and also in world statistics, it is based on the utilization of data concerning the commodity output in comparable (I emphasize, comparable) wholesale prices and a unified methodology for the report year and the preceding year. Moreover, the methodology for calculating indexes of the growth of production volume is based on the fact that when establishing prices for new kinds of products one takes into account the change in the consumer qualities. Of course, there is no doubt that improvement of price setting and more precise accounting in the price for consumer qualities, quality characteristics and, in the final analysis, the economic effectiveness of the product will contribute to increasing the objectiveness of indicators of the dynamics of industrial production.

As concerns machine building, the data for the dynamics of the development of this branch at least for 1987 in no way give rise to an "illusion of progress." The complex has made serious mistakes in its work and has failed to fulfill planned assignments for the output of products in physical terms. And the growth rates of output here are significantly less than expected. What kind of progress is this....

Let us emphasize two important aspects: the first—when describing the existing condition, interconnections, flows and turns it is important to do this in actually effective prices. And the second thing—when studying the dynamics of the physical volume, everything is done to include the influence of prices on these processes just as with certain other aspects (the difference in territory, the different structures, and so forth).

[Question] For whom do you prepare your data? Exclusively for officials? In your opinion, to what extent can they be useful in daily life in the work of the ordinary average statistical individual?

[Answer] Consolidated data are prepared for various purposes and they have their own recipients, their own specific features, and their own "order."

Interest in our publications has increased a great deal. I do not agree with you when you say that they should be intended for the average statistical person. Our publications must go to the broadest range of readers, and sometimes they should be differentiated—according to their interests.

We receive hundreds of letters from readers and from these we get the sense that interest in statistical information is increasing. And we take into account their wishes, their remarks, and their complaints. I am convinced that a knowledge of statistics is useful for every person today in his daily life, especially now when our country is making a sharp turn in its development. I think that expansion of the publication of statistical data is one of the forms of participation of state statistical agencies in the democratization of the society. A person who has complete and exhaustive information has a deeper understanding of the problems facing the society.

Moreover, we also do other work. The USSR Goskomstat and its regional services, on orders from scientific institutions and higher educational institutions and in keeping with their plans for scientific research work, give these organizations the necessary statistical data. We shall also expand our participation in the work of international statistical organizations.

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## REGIONAL DEVELOPMENT

### Estonia Calls for Greater Republic Role in Financing, Planning

18200193 Tallinn SOVETSKAYA ESTONIYA in Russian 14 May 88 p 1

[Article by K. Pollisinski (member of the working group): "After the 10-Day Spurt"]

[Text] I do not know who has it harder—the journalists who tried to cram into the by-no-means rubbery frameworks of newspaper pages everything that deserves attention from among that which has come to the editorial office, or the working group under the Estonian SSR Ministry of Justice, which was created by the ESSR Council of Ministers Presidium, and which, in the 10 days allotted it, should have mulled over questions of expanding the rights of Union republics in the areas of state control, planning and finance. It was clear to everyone that the 10 days was an indisputably short time. And all the group's members decided to try to formulate their recommendations by relying on both what had been carefully thought out beforehand and the additional recommendations that arrived literally in the last days.

I shall try to tell about the most important features of the group's work, which were presented in the form of recommendations to the Commission on Improvement of Control, Planning and the Economic Mechanism of the Presidium of the ESSR Council of Ministers. They, in turn, will transmit them to the ESSR Council of Ministers for petition to the CPSU Central Committee and the country's government.

We proceeded from the thought that it is desirable to concentrate within the republic's jurisdiction all questions that touch on the structure and activity of republic and local organs of state control, including the pivotal problems of controlling the republic's economy (among them science and protection of the environment).

First of all the concept of nationwide state ownership should be refined. Our recommendation: to write in the USSR Constitution that USSR state ownership (except for the defense sphere) consists of the state ownership of all the Union republics. The Union republics are the managers, with equal rights, of the property within their territories, and they carry out their statewide obligations in the economic sphere under Union organs only on the basis of mutual agreements, in which the rights and responsibilities of the parties are defined precisely.

### Finances

It is desirable to consolidate in the republic's budget all state income (including foreign exchange) that comes to a Union republic's territory.

Payments into the Union budget from a Union-republic budget are determined on the basis of long-term, stable standards and only in the amount that is necessary for the realization of All-Union aims.

Stable long-term standards for financing the republics from the All-Union budget must be established.

Authorize the republics to establish independently a system for forming a state budget, including a procedure for including state income in republic and local budgets. Give Union republics the right to approve their own budgets independently, without coordinating with All-Union control figures and with USSR Minfin.

#### Planning

Give all facilities of the national economy (including those that are regional) the right to make up plans for their activity independently. For this purpose we consider it desirable to transfer to the Union republics' jurisdiction:

—the coordination of state orders and the distribution thereof among enterprises within their territory in order to preserve the integrity of the Union republics' economic policy;

—control of investment policy in the area of capital investment from the republic's budget and from centralized sources; and

—all concrete decisions about using natural resources, including the amount of timber felling, securing for users useful minerals within the republic's territory, and so on.

In the area of economics, leave long-range planning of the national economy, compilation of the All-Union budget, the establishment of All-Union payments, and the formation of All-Union funds for material and monetary resources and their distribution among Union republics in accordance with long-term stable standards, in the hands of All-Union central organs (with the concurrence of the governments of the All-Union republics).

Therefore, when refining draft USSR legislation about general statutes and about USSR ministries and USSR state committees, a specific mechanism for regulating the relations between the governments of the Union republics and All-Union central agencies should be defined. In so doing, the range of questions that are subject to mandatory concurrence by Union-republic councils of ministers with All-Union central agencies should be substantially narrowed.

We consider that in the long term it would be wise to greatly reduce the number of Union agencies (especially in the economics sphere). In refining the main tasks of central and Union-republic agencies, we consider it necessary to leave to them the solution of those tasks

which are associated only with long-term problems within their branch, with creation of the necessary resources, and with the coordination of interrepublic deliveries. In accordance with this, the functions, rights and responsibilities of all elements of administration should be reviewed.

At the same time, it is desirable to transform Union and republic agencies (excluding USSR Gosplan, USSR Goskomstat [State Committee for Statistics], USSR Minfin, the USSR Ministry of Foreign Affairs, the Ministry of Internal Affairs, the USSR Ministry of Justice and the USSR Committee for State Security) into republic agencies.

The role of republic organs in the administration of and control over the activity of those enterprises and organizations of Union subordination that are located within the territory of the Union republic should be raised considerably. All scientific institutions (excluding defense institutions) located within a Union republic should be subordinate to republic organs.

It is absolutely necessary to create legal guarantees that would exclude today's practice, under which Union central agencies can, on their own authority, give Union-republic councils of ministers mandatory orders. The range of questions on which Union central agencies would be prohibited from giving any kind of order to republic administrative organs and to enterprises located on a republic's territory should be defined precisely.

Determine the procedure and the form of responsibility for the case where central agencies ignore the procedure set for coordinating decisions that affect the economy of the Union republic and its populace with the council of ministers of the appropriate Union republic.

We consider expansion of the rights of Union republics in LEGISLATIVE ACTIVITY to be very important.

We consider that it would be correct if only the establishment of the general principles of legislation should remain within the jurisdiction of the Union of SSR's.

Therefore, all aspects of the bases for Union-republic legislation in the areas of land, water, forest, residential, and labor legislation, as well as of legislation about minerals and protection of the atmosphere, the animal world, and so on, should be reviewed. The constitutional rights of the sovereign Union republics in these areas must be expanded, and the range of questions that are within the exclusive competence of the center should be narrowed.

At present, All-Union legislative enactments that regulate the spheres named establish unconstitutional restrictions on local organs (leaving the deciding of basic

question within the jurisdiction exclusively of national level organs), depriving the republics of the opportunity to solve key problems and leaving to them the discussion of secondary problems.

In principle, both development of the Law on Cooperation and establishment of the procedure for operating kolkhozes should be transferred to the Union republics' jurisdiction. It is All-Union legislation that would regulate statutory principles in these areas.

In order to strengthen constitutional guarantees of the rights of Union republics, the USSR Constitution should specify that, where there are some discrepancies between Union and republic legislative enactments, the Union legislation prevails if it does not abridge the constitutional rights of the republic.

In order to resolve such disputes, we consider it necessary to create under the USSR Supreme Soviet an independent organ—a USSR Constitutional Court. The composition of the Constitutional Court should include representatives of all the Union republics on an equal footing. The representative of each republic should be vested with the power of veto in order to block decisions that abridge the sovereign rights of the Union republic.

In order to protect republic organs from the highhandedness of All-Union agencies that are located on the lands of a Union republic, Union-republic councils of ministers should be granted the right to stop the execution of a decision that abridges the right of the Union republic, regardless of which Union central agency originated it, right up to a decision of the USSR Constitutional Court on a given question.

In order to insure actively equal representation of all Union republics in the Supreme Soviet of the Union of SSR's, we consider it desirable to elect deputies to the Council of Nationalities only by the republics and on an equal footing. Representatives of autonomous republics, krays, oblasts and okrugs should not be included in the

Council of Nationalities of the Supreme Soviet of the Union of SSR's. They should be represented only in the supreme soviets of the Union republics within whose territories the autonomous units have been formed.

If the republics are to participate actively in nationwide legislative activity, we consider it necessary to give the Union-republic governments the right to present legislation to the Supreme Soviet of the Union of SSSR's.

Based upon what has been said above, we consider it necessary to establish two new USSR laws:

—a USSR Law on the USSR Constitutional Court; and

—a USSR Law on the Soviet Federation, which would define precisely the relationships both among the Union republics and between individual republics and the central organs of authority, and also the mutual rights and responsibilities for control of the republic and of the entire state (planning, the economy, the subordination of branches of the economy, the limits of legislative independence, and so on). It is there that the status of the language of business correspondence in the Union republics, as well as the procedure for resolving differences between republics and the central organs, should be settled.

This, in brief, is the whole thing. One cannot be briefer, for that would hurt the content. One cannot be more verbose because of the restriction on the size of the newspaper page. The referenced document is 15 pages of printed text plus 35 pages of recommendations received from citizens, scientific institutions, and agencies. Many thanks to the authors of these recommendations! Attached to it are 14 more pages (out of 88 pages of All-Union legislative documents) which, in the working group's opinion, should either be repealed or changed in accordance with the recommendations cited above.

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## REGIONAL DEVELOPMENT

### Data From RSFSR Regional Agricultural Conferences

#### RSFSR's Farm Sector Evaluated

18240073 Krasnodar SELSKIYE ZORI in Russian  
No 3, Mar 88 pp 1-3

[Unsigned account of a session of RSFSR Gosagroprom: "From the Positions of Restructuring"]

**[Text] The country's agroindustrial complex stands at the beginning of the road. Following the course of the 27th CPSU Congress and the January, June (1987), and recent February (1988) Plenums of the CPSU Central Committee, farmworkers have entered a new stage of restructuring and have begun the practical effort to convert the sector to full cost accounting (khozraschet) and self-financing. This has brought to life new methods of economic activity, in particular the planning and remuneration of labor and changes toward improvement of management of the economy.**

**How is the paramount problem, the food problem, being solved in our part of the country? What has been the final result for the first 2 years? An answer was given to these questions in a session of the RSFSR Gosagroprom which discussed the results of fulfillment of the state plan for economic and social development of RSFSR Gosagroprom in 1987 and the tasks under the new economic conditions and in the light of the requirements of restructuring. L.B. Yermin, first deputy chairman of the RSFSR Council of Ministers and chairman of RSFSR Gosagroprom, presented the report. The report of the first deputy chairman of RSFSR Gosagroprom, Minister V.V. Nikitin, on production of high-protein livestock feeds and on the intensive fattening of cattle was also discussed in the session.**

#### The First Result

The principal branches of the agroindustrial complex have been developing dynamically, in keeping with the targets of the 5-year plan. The average annual volume of gross output for the 2 years rose 7 percent in the Northern Caucasus Economic Region and 17 percent in the Central Chernozem. There have been shifts in such an important qualitative indicator as labor productivity. For many years it was disturbing not only because of the low rates, but also because the rise of wages greatly outstripped the rates of increase of labor productivity. Now the situation is gradually changing. Over the period 1986-1987 labor productivity on kolkhozes and sovkhozes rose 31-46 percent in the Central Chernozem Region and 3-19 percent in the Northern Caucasus compared to the average annual level of the last 5-year planning period, while the growth of wages was 17-26 and 6-16 percent, respectively.

Substantial changes have also been outlined in animal husbandry, where signs of stagnation have been observed for many years. Now production and purchases of all the products of livestock-raising farms and complexes are growing steadily in this vitally important branch. In 2 years the volume of purchases of livestock and poultry exceeded the average annual level of the 11th FYP by 21 percent in Northern Caucasus and 27 percent in Central Chernozem. The state received 464,000 tons of meat, about 1.1 million tons of milk, and more than 970 million eggs over and above the plan from those two zones.

It is significant that the growth of production of purchases of agricultural products has been achieved thanks to intensive factors. The average yield of grain crops in the fields of farms of Northern Caucasus rose 3.6 quintals per hectare during the 2 years, and reached 39 quintals per hectare in the Kuban, 34.5 in North Osetia, and 34 quintals in Kabardino-Balkar. In the Central Chernozem the increase in the yield was 10.2 quintals per hectare. Last season its highest level was achieved by the Belgorod croppers: 28.4 quintals per hectare.

For the first time in many years the rise in production cost was halted, and for milk and eggs it was reduced somewhat last year in almost all oblasts, autonomous republics, and both krays. As a result, the kolkhozes and sovkhozes of Central Chernozem brought total profitability up to 24 percent, in Northern Caucasus up to 21 percent, while in the recent past many farms suffered large losses.

The Lipetsk Oblast Agroprom made a notable addition to the growth rates of agricultural production, fulfilling the 1987 plan by 108 percent and adding 7 percent over last year. For the 2 years its gross output from cropping and animal husbandry rose 23 percent.

An acceleration in development was also noted in the agroindustrial complex of Belgorod and Tambov Oblasts.

Changes for the better have also been instilled in the operation of industrial enterprises in the unified system of the APK. There was some growth in the volume of industrial production, and the plan of purchases was exceeded for the most important foodstuffs.

Performance of the social program is improved and more vigorous. Plans were fulfilled for construction of housing, general public schools, and children's preschool institutions. This has helped to keep personnel in rural areas.

#### The Situation in Cropping

Yet the conclusion cannot be drawn that all of the shifts outlined in the agricultural sector of the economy are satisfactory. There still has been no sharp change of direction in the comprehensive development of the

APK. The state of affairs remains problematical. Much of what was outlined in the decrees of the party and government and in the Food Program has been left undone. And for all practical purposes what has been done represents only the first steps on the road of restructuring. The main and most complicated effort lies ahead.

Because of the weakness of the base branch—cropping, and the unsatisfactory effort to increase the fertility of the land our regions have remained debtors to the state with respect to a number of products. For the first 2 years of the current 5-year planning period the shortfall exceeded 1.2 million tons of grain. The Rostov, Voronezh, and Tambov Agroproms fell short. The farms in Krasnodar Kray fell short during that period by about 2.8 million tons of sugar beets and 109,000 tons of sunflowers. This is a large debt, and it means that the growth rates of production must be far higher than achieved in the first stage of the 5-year planning period. The same requirement applies to other products as well.

In the situation that has come about managers and specialists of the APK cannot but be disturbed by an old disease: the large swings in the indicators of the productivity of fields and livestock-raising projects from year to year and from farm to neighboring farm and between neighboring rayons and oblasts. Yet the same task is being advanced to the foreground everywhere: to develop all branches stably on every kolkhoz and sovkhoz and in every subdivision of the agroindustrial complex. There is a need to mention this because while comparatively fair results were achieved in the 1st year, especially in cropping, in both zones, they were unable to consolidate them and add to them in 1987. In North Osetian ASSR the drop in production of this product was 30 percent. In Dagestan and Chechen-Ingush ASSR's there was a drop in the production of gross output as a whole. Managers and specialists of agroindustrial committees put less blame on themselves for these swings, and refer more frequently to the bad weather.

Optimum utilization of fixed capital is growing now to become a major problem whose solution is crucial to intensification of production as a whole, and that means crucial as well to its stability, to the reduction of costs, to the economic prosperity of the farms, and ultimately to the growth of output per unit of land area and per ruble of costs.

Another reason for having to talk about this is that in recent years the value of fixed productive capital has grown far faster than the value of gross output. In Rostov Oblast this capital is grown 13 percent, while the production of gross output has grown 1 percent.

The principal means of production—the land, is still being poorly utilized and its fertility is dropping. On most farms there is an uninterrupted process of reduction of humus. Over the last 1.5 decades it has dropped by 0.5-2 percent. This process is becoming threatening.

And certain managers in the scramble for short-term gain have continued to inflict injury on that valuable resource, so that yields are dropping, the yield from fertilizer is not increasing, and in general many troubles are accumulating in cropping.

Recently, the CPSU Central Committee specifically took up the question of raising productivity and the yields of cropping in Rostov Oblast. The decree adopted evaluated the activity of party organizations and soviet and agroindustrial authorities to develop agriculture, which found that it was not in keeping with the decisions of the 27th party congress to accelerate development of the APK.

While the sector does have a mighty potential in terms of production, personnel, and science, so far there have been no essential changes in the augmentation of food resources, grain production is developing unevenly and unstably. The yield of grain crops has dropped 2 quintals compared to the 10th FYP. In the 9th it did not exceed 17.8 quintals, in the 10th it rose 1 quintal, and in the 11th it fell to 16.8 quintals. In 1986, 18 quintals of grain were harvested per hectare, and in 1987 only slightly more: 21.4 quintals. Gross harvests of sunflowers and vegetables have dropped off considerably. Actually, the rates set by the Food Program have not been met for a single product.

In the situation that has taken shape the oblast agroprom lacks consistency and determination in taking effective steps to overcome the protracted lag in the development of cropping, has not been as exacting as it should toward managers of kolkhozes, sovkhozes, enterprises, and construction organizations for guaranteeing maximum return on the resources invested. On many farms technological discipline remains low. More than one-third of winter crops are dying every year because of this. The number of breaches has been particularly high in cultivating fallow land and crops being raised by an intensive technology. Although the area of fallow land has been adjusted to optimum size in recent years (850,000 hectares), combined cultivation is being practiced on only 14 percent of fallow land. Poor use is being made of improved land, the yield of farm crops on irrigated land is half what had been projected. Production of animal feed is developing slowly on irrigated land. As a consequence, the growth of labor productivity has been poor, and milk production has been dropping off. Moisture-saving methods of cultivation that protect the soil are being introduced at a slower pace even though two-thirds of the plowland is subject to erosion by wind and water. The impact of organic matter on soil fertility is underestimated: only a third of the required stable manure is being applied.

Rostov Oblast, unfortunately, is no rare exception. In Chechen-Ingush ASSR the grain yield last year was slightly over 18 quintals per hectare, while in Dagestan it was 21.4. In the Central Chernozem Zone the lowest grain yields were in Tambov Oblast: 23.7 quintals per hectare.

As on the Don, intensive technologies have not yielded the results anticipated in many oblasts. Some of the managers and specialists are still looking upon intensive farming in the same way as ordinary farming, erroneously supposing that all they need to do is to apply more manufactured fertilizer and let things go on as before. This profound mistake is costing very dearly.

Here is just one example. On the Kolkhoz "Pobeda" and the Sovkhoz "Chernoyarskiy" in Mozdokskiy Rayon of North Osetia (farms which have always grown grain with excellent conditions) they had a yield last year from intensive crops of 12-15 quintals of grain, whereas the average for the rayon was 36 quintals. On both farms rates and proportions of chemical fertilizers, especially phosphorus, were violated in the face of elementary requirements, the crops were not treated against pests and diseases, and there were large losses in harvesting the grain.

On many farms of our zone the raising of seed has to be fundamentally improved. Every year almost one-fifth of kolkhozes and sovkhozes are not furnished seed, 1 out of every 4 or 5 tons of seed of spring and winter grains sown is substandard or belongs in the third class. Irrecoverable losses of grain occur in harvesting. Recently, there has been a dangerous trend on many kolkhozes and sovkhozes: the area planted to grain crops has been cut back sharply without any sound reason.

The shifts that have been outlined in the production of the seed of sunflowers, sugar beets, vegetables, potatoes, fruits, and berries cannot cover the serious lapses in technology and organization of work on plantations and in orchards and the weak or inept application of progressive agricultural practices. Whereas, say, in the Central Chernozem the plan for purchases of vegetables was exceeded by all oblasts, in the Northern Caucasus this was achieved only by the Kuban, Dagestan, Kabardino-Balkar, and North Osetian kolkhozes and sovkhozes. The shortfall for the 2 years was 32,000 tons in Chechen-Ingush ASSR, 54,000 in Stavropol Kray, and 144,000 tons in Rostov Oblast.

#### Orientation Toward Seeking Out Resources

For all the difficulties and problems—and there have been quite a few in the last 2 years—both of our zones have increased the production and purchases of livestock and poultry and of milk and eggs. Plans were substantially overfulfilled for sales of all types of products of animal husbandry by farms in Belgorod, Voronezh, Lipetsk, and Tambov Oblasts and Krasnodar and Stavropol Krays. As a consequence, they increased the sales of meat and milk for local supply. But if everywhere (except Rostov Oblast) milk production was up in dairy herds, in both zones they failed to keep up with the figures on meat productivity achieved a year ago. According to the 1987 results, the average weight per head of cattle delivered for slaughter to the meat industry dropped 3-15 kg in most oblasts and 30 kg in North

Osetia. On the farms of Chechen-Ingush ASSR and Rostov Oblast there was a drop in the weight gain and number of animals raised, cattle losses were up and the number was down, and this has already caused great difficulties this year with meat deliveries for all-union and republic stocks and for local supply. Instead of seeking out local reserves, on many farms they still have not given up dependency and have been trying to solve the problems of obtaining food by presenting more and more requests for help and additional resources.

Wherever a step forward has been taken in animal husbandry, there is reason to speak of managers and specialists of the agricultural sector paying more attention than before to feed production. This has been manifested in the volume of feed put by and in the quality of feed. Although restructuring is, of course, only beginning.

In view of the importance of strengthening the animal feed base, we will refer to two crops which have played an important role here. We are thinking of corn raised as a grain and rape. The green matter of the stalks, silage, including cobs at milky-waxy maturity, which most farms have started to put by, has had a noticeable impact on livestock productivity. On the Sovkhoz "Avangard" in Belgorod Oblast, for example, mastering the intensive technology for raising corn has increased the production of high-quality silage with ears by half. As a result, in just the first 3 months of the present winter season they have been obtaining almost 1,000 kg of milk per cow.

The yield is still more noticeable from feeding rape. On the Sovkhoz "Krasnyy Kolos" in Lipetsk Oblast they put up the same amount as a year ago for this winter's feed, but they harvested 850 tons of rape. The farm sold some of it to the state and to neighbors, but it processed 450 tons into oil and obtained the oil cake. Feeding rape oil cake resulted in a kilogram gain in milk production per cow per day. The people from Lipetsk have calculated that this crop alone has added to the oblast's milk production more than 170 kg per cow.

#### Here Again New Approaches Are Needed

Our processing industry has been awaiting radical transformations. The level of development of this sector is as yet not responding very much to the requirements of the times. Enterprises are continuing to make poor use of internal potential, they are timid in solving the problem of product quality and raising the efficiency of operation. The blame for this is placed on the leadership of agroindustrial committees. Many agroproms have been unable to carry out state plans and orders for the principal types of products. To be specific, of the eight oblasts and krays making granulated sugar from sugar beets at their own enterprises, plans were fulfilled by only Lipetsk Oblast and Krasnodar and Stavropol Krays, in the case of vegetable oil production only by Tambov Oblast and Kabardino-Balkar ASSR, and for starch only Belgorod Oblast and Kabardino-Balkar ASSR.

The quality of the product produced has not been improving. Last year enterprises of the dairy industry received from the farms of the Northern Caucasus only 81 percent of the first-grade milk, and from the Central Chernozem it was 86 percent. Much substandard milk (between 8 and 37 percent) has been delivered by farms and complexes in Tambov Oblast, all the autonomous republics, and Stavropol Kray. There has been a shortage of milk suitable for cheesemaking. In Voronezh, Belgorod, and other oblasts the supply of this milk has been no more than 5-10 percent. In other words, in many places cheese are being made from something else.

The situation is compounded by numerous violations of technological and sanitary regimes at enterprises in the dairy industry and by the low level of utilization of production capacity. As a consequence, last year there was an increase in the rejection of creamery butter and drawn butter and whole-milk products. To be specific, there has been an increase in the products rejected at enterprises of the meat industry of the Belgorod and Kabardino-Balkar Agroproms.

There have been serious complaints about the operation of repair enterprises. Last year they dropped off 8 percent in the volume of reconstruction work. Their productive potential is not being fully utilized at all. As in the past, agrosnabs have been tardy in deliveries of equipment, repair materials, and other supplies to farms and enterprises, they have done a poor job of maneuvering merchandise, and they have not been developing wholesale trade and trade on commission. And this in a situation when above-allowance stocks of merchandise exceed 20 percent. It is no accident that the stream of complaints and justified reproaches of this department has not been dying out, but has been growing. What is more, at the local level the disputes have not been dying out over the question of where supply people should be located: in an independent organization or within repair enterprises.

In spite of favorable factors, there are also many substantial oversights, shortcomings, and lapses in capital construction. Success was not achieved in sharply improving the quality and reducing the cost of construction work and in shortening project construction time. Manpower and resources continue to be scattered. Projects in the sphere of the social services are being built slowly, especially in remote areas and on kolkhozes and sovkhozes which are economically weak. Resource conservation in construction has not been what it should be at all. The level of profitability of construction organizations and enterprises is low, and organizations belonging to Rosagropromstroy are making ineffective use of material and technical resources. One of the reasons for these shortcomings is the poor management of capital construction on the part of agroproms, the low level of exactingness toward construction contractors and the client's departments, and the little assistance they are receiving. This is in fact the explanation for nonfulfillment of plans for absorbing capital investments

in Voronezh Oblast and Dagestan and Chechen-Ingush ASSR's. Plans were not fulfilled for activation of housing financed from state capital investments by the agroproms of Belgorod, Rostov, and other oblasts. Appropriations for construction and retooling in the meat, dairy, food and canning industries fell millions of rubles short of complete absorption.

Since January of this year the entire system of RSFSR Gosagroprom has been converted to full cost accounting and self-financing. Now if the agricultural sector is to lead a normal life, it must earn its own resources: it will no longer get them from the state budget. This makes it imperative for the managers and specialists of agroproms to thoroughly analyze the causes of the lag in every branch and to take vigorous measures to guarantee stable development of the production of grain, oilseed, vegetables, and fruit, intensive animal feed production and achievement on that basis of a larger output of meat, milk, wool, and eggs. Management personnel need to understand clearly how the priority directions of resources invested in agriculture must develop. The financial results also suggest this approach. In Northern Caucasus there are still 250 farms operating at a loss, while in the Central Chernozem there are 32 (including 26 in Kursk Oblast alone). Almost as many farms ended the year without a profit, and there were very few kolkhozes and sovkhozes that achieved high profitability.

Economically literate economic activity—that is what is needed everywhere now. It presupposes application of intensive technologies, improved organizational forms and forms for remuneration of labor, and efficient use of physical and financial resources. In other words—active and conscientious effort by every kolkhoz member, sovkhoz worker, or employee of another enterprise, mastering a knowledge of economics, knowing how to earn money and how to spend it. In our time you cannot get along without enterprise, initiative, and a commercial streak. The transition everywhere to the shop structure of management, remuneration of labor based on gross income, the collective, family, and lease contracts, the search for new forms of integrating science with production, transformation of the RAPO from a command-administrative body to a structure concerned with production and economic activity can become an effective means of raising the economic level of the farms. That is also the objective of the conversion of the entire system of RSFSR Gosagroprom to a unified economic regime for the production, processing, and sale of products, in which the emphasis is on the end result.

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**Intensified Grain Production in Urals, Siberia,  
Kazakhstan**

18240073 Omsk ZEMLYA SIBIRSKAYA,  
DALNEVOSTOCHNAYA in Russian No 8, Aug 87 pp  
2-3

[Unsigned account of zonal seminar-conference held 12-13 Jun in Omsk: "Solving the Problems of Intensification More Rapidly"]

[Text] The urgent problems in development of the agro-industrial complex were at the center of attention of partic-

ipants in a zonal seminar-conference held 12-13 June in Omsk.

Secretaries of party obkoms and kraykoms, chairmen and deputy chairmen of agroindustrial committees, scientists, and key officials of agrochemical services and kolkhozes and sovkhozes of the autonomous republics, krays, and oblasts of the Urals, Siberia, and Northern Kazakhstan took part in its proceedings.

V.P. Nikonov, secretary of the CPSU Central Committee, spoke to the participants.

L.B. Yermin, first deputy chairman of the RSFSR Council of Ministers and chairman of RSFSR Gosagroprom, and A.P. Rybnikov, secretary of the Kazakhstan CP Central Committee delivered reports on the tasks of party, soviet, and agricultural authorities in applying intensive technologies for raising farm crops, for putting feed by, and for harvesting the crop.

The reports and the speeches emphasized that the Urals, Siberia, and Kazakhstan are being given an important role in the steady growth of grain production. They account for about 51 million hectares of the grain crop planting, including more than 28 million hectares of food wheat. The kolkhozes and sovkhozes of these regions are producing many other food crops.

Intensive technologies have been opening up immense opportunities for farms to further increase grain production. Crops raised using these technologies in Siberia and the Urals, for example, have accounted for 30 percent of the gross grain harvest, although they occupied 25 percent of the total area planted to grain; in Altay Kray these figures were as follows: 35 and 23 percent, in Orenburg Oblast 19 and 14 percent, in Kurgan Oblast 38 and 30 percent, and in Krasnoyarsk Kray 41 and 32 percent.

At the same time, the capabilities of intensive technologies on many farms of the country's eastern regions are not being fully utilized at all. The target yields set by decree of the CPSU Central Committee and USSR Council of Ministers are not being attained. This has meant a shortfall of about 1 million tons of grain in Altay Kray and Chelyabinsk, Novosibirsk, and Omsk Oblasts alone.

There is a great unevenness in the level of the yield on intensive fields. For instance, on 14 experimental farms of Siberia's scientific establishments the yield of spring wheat on 69,200 hectares averaged 23.7 quintals per hectare when cultivated intensively, while in the region as a whole it was 5.5 quintals less. Kolkhozes and sovkhozes of Novosibirsk Oblast achieved an improvement of only 4.9 quintals per hectare from intensive fields, in Omsk Oblast 3.7 quintals, in Kurgan 4.8, and in Sverdlovsk Oblast 4.6 quintals.

The reason for this situation lies mainly in underestimation on the part of party, soviet, and agricultural authorities of broad application of progressive technologies and the organization of work, as well as in the low level of sophistication about cropping and poor technological discipline. There are still quite a few managers and specialists who have not yet realized that intensive technology requires more thorough knowledge, performance of technological methods to the letter, strict observance of the intervals for performing operations, for applying fertilizers and pesticides, plowing the soil to the right depth, and covering the seed with just enough earth.

The greatest bottleneck in Siberia and Kazakhstan in raising grain crops with intensive technology has been plant pest and disease control. The volume of these operations has grown considerably here over the last year. But agroproms, managers, and specialists of farms in most oblasts have proven not to be ready in either theory or practice for their performance, and party committees have left this effort to fend for itself. On the kolkhozes and sovkhozes of Altay Kray, for example, a survey of the phytosanitary state in 1986 was conducted on only 5 percent of the area being cultivated with intensive technology. Many crops had not been treated with chemicals and turned out to be infected with diseases. As a consequence, the average yield from intensive crops was only 18.3 quintals per hectare.

An especially large shortfall of the yield is occurring because of the weediness of crops, the low quality of the seed, missing dates for applying herbicides, and a lack of knowledge of how to work with manufactured fertilizers.

The low rates of liming acid soils and applying gypsum to solonets soils are also causing a great deal of anxiety. As a consequence, the area of acid soil has been practically unchanged over the last 20 years in Western Siberia, while in Eastern Siberia it has grown almost 4 percent.

The rate of efforts for combined agrochemical treatment of fields is growing slowly in the Urals and Siberia, and in Kazakhstan they have practically ceased now that the Selkhozkhimiya associations have been abolished.

It was especially emphasized that crop rotation in which bare fallow is included is the basis for stable grain production in these regions. But bare fallow is not being used effectively there. Some of the fields left to fallow are seeded to feed crops, on many tracts the plowing is done late, little mineral and organic fertilizers are applied to them, and often the fields grow up in weeds. Last year approximately 600,000 hectares of bare fallow in Altay Kray, Bashkir ASSR, and Omsk, Kurgan, and Novosibirsk Oblasts were not planted to spring wheat for cultivation by intensive technology.

Given the lengthy and rainy fall, it is especially important in Siberia and northern Kazakhstan to treat intensive crops located on bare fallow with so-called retardants. They prevent plants from lodging. But the use of this method is extremely insufficient. A sizable loss of the harvest occurs as a consequence. This year the farms of Siberia and Kazakhstan have been allocated threefold more retardants than last year, and the task is to use them all in good time.

This year's conditions are favorable for the spread of every type of plant pest and disease. The efforts of agronomy services, rayon stations for chemicalization, and scientific institutions need to address this persistently. Particular attention must be paid to protecting crops against weeds.

The speeches emphasized that under the conditions of the Urals, Siberia, and northern Kazakhstan methods regulating plant growth but also allowing cereals to mature faster are very important. The farms must make more extensive use of growth regulators and not allow the crop to lodge. The Siberian Branch of the USSR Academy of Sciences has developed a method of senication, which consists of treating crops with ammonium nitrate from the air, which not only speeds up the ripening of grain crops, but also improves their yield and the quality of grain. This is especially important this year, when planting was done later than usual.

The participants in the conference devoted much attention to analyzing the state of affairs in livestock feed production. Many oblasts and autonomous republics, they noted, are failing year after year to fulfill the plan for putting by coarse and succulent feeds and are allowing the protein content to be low.

Natural forage land plays an important role in strengthening sources of feed for animal husbandry. But the effort to increase productivity and improve the use of this land is going poorly. Plans to improve hayfields and pastures are going unfulfilled year after year. Efforts toward radical improvement of land have been performed especially unsatisfactorily on the farms of Udmurt ASSR and Perm, Tomsk, Irkutsk, Karaganda, and Semipalatinsk Oblasts.

This year the CPSU Central Committee is attributing particular importance to increasing the amount of high-quality feed laid by and to its preservation. Party committees have been set the task of achieving a harvest of at least 21 quintals of feed units of coarse and succulent feeds per standard head of livestock. Progressive forms of the organization of work and work incentives, the check system of monitoring feed consumption, and also remuneration for the final results adjusted for the quality of the feed must be widely disseminated.

Much attention has been paid to the problems of raising whole-grain and oilseed crops and to thorough preparation for harvesting the yield. High praise was expressed

in the seminar-conference for the effort of farms in Omsk Oblast that created highly productive flow-line complexes for primary processing of the grain, and the desire was expressed that the experience gained by widely applied.

Large cattle herds are kept on the farms of the Urals, Siberia, and northern Kazakhstan. In analyzing the work of husbandmen the speakers pointed to lapses which have prevented a number of oblasts from increasing production of animal products at a high pace and from fully supplying their population. In this matter, they said, we need to use not only the reserves of socialized livestock raising, but also the capabilities of personal subsidiary farming projects and subsidiary farms of enterprises, as is being done in Omsk Oblast. Here 109 kg of meat are produced per inhabitant. In just the last 2 years this figure has risen by 7 kg. Meat production in the private farmyard has grown from 27,000 to 60,000 tons over the last 10 years, or 2.2-fold. Party, soviet, and economic authorities have seen to it that practically every family in rural localities is raising cattle, swine, or poultry.

The participants in the seminar-conference devoted much attention to the study of practical experience gained by the agroprom of Omsk Oblast. They proposed a large and full program.

In Tavricheskiy Rayon V.P. Nikonov, secretary of the CPSU Central Committee, had numerous meetings with officials of the consumer cooperative, visited sausage and confectionery production shops and the stores of the raypo. The problems of intensifying production of beef in the oblast and of improving the sources of feed for animal husbandry were discussed from every angle with party, soviet, and economic managers of Tavricheskiy Rayon and the oblast, with specialists and animal husbandrymen of one of the country's largest complexes for fattening and raising 10,000 head of young cattle.

Models of present-day agricultural equipment intended for intensive cultivation and harvesting of grain, feed, and oilseed crops were examined in the wheatfields and forage land of No 2 Teaching Farm of the Omsk Agricultural Institute imeni S.M. Kirov and experimental plots of SibNIISKhоз. High praise was given to the highly productive flow-line complexes for primary grain cleaning created by the people from Omsk and widely applied on the oblast's largest grain farms and the work of the creative association of selection experts "Sever" in creating early corn varieties and hybrids. In SibNIISKhоз particular interest was aroused by the Omsk system of testing, applying, and regionalizing new varieties of grain crops.

A discussion of substance was conducted on the Sovkhoz "Luzinskiy" concerning the potential for increasing grain production. This farm is a leader of scientific-technical progress in agriculture. New equipment and

instruments, up-to-date methods of diagnosis, and high-speed analyses are used there on an everyday basis. The immense opportunities in use of flexibility in harvesting were revealed by the field of winter grain, which represents about 30 percent of the grain crop pattern (its yield today is on the order of 60 quintals per hectare). This means attainment of the cherished goal of Siberian croppers—to harvest spring crops at a better time and send high-quality grain to the state.

The participants in the seminar-conference devoted much attention to experience in production of hardy grain. They presented a system for discovering and achieving high-quality lots of wheat. They also examined the work of laboratories to study grain for the content of residual pesticides and harvesting equipment. Many were especially impressed by the machine yard of the Sovkhoz "Luzinskiy." This is an up-to-date enterprise for machine repair and operation where the stewardly approach and engineering thought are felt in every aspect. Here all the equipment is under a good roof and was fully ready to harvest the new crop.

The experience of the Sovkhoz "Luzinskiy" and other production and scientific subdivisions in Omsk aroused lively interest among representatives of Siberia, the Urals, and northern Kazakhstan and undoubtedly helped them to see the deep potential for development of the agroindustrial complex. The idea resounded at the seminar-conference that if things were organized as in Luzino there would be a great deal of change in agriculture.

Many RAPO's, kolkhozes, and sovkhozes over an extensive region of the country were commended for their progressive know-how at the seminar-conference. For instance, in Irkutsk Oblast all the farms have in a short time built machine yards and radically changed the attitude toward equipment. Quite a few farms were noted where they have displayed models of progressive organization of work that help in full realization of the advantage of intensive technologies not only through the resource factor, but also through the human factor. V.I. Kozhukhov, link leader on the Kolkhoz "Bolshevik" in Ordynskiy Rayon of Novosibirsk Oblast, noted in speaking about experience in the effort of the intensive work collective that today every machine operator needs better experience and more thorough knowledge than ever before, since oversights in raising grain crops on an intensive field can result in substantially larger losses than in an ordinary field. It is this approach, the stewardly attitude toward the land, that makes it possible for intensive work collectives to produce a gross output of about 80,000-90,000 rubles per worker.

The report of L.B. Yermin, deputy chairman of the RSFSR Council of Ministers and chairman of RSFSR Gosagroprom, also noted such farms as the Kolkhoz "Put k Kommunizmu" in Sovetskiy Rayon of Altay Kray, the Sovkhoz "Nazarovskiy" in Krasnoyarsk Kray, and others, which year after year have achieved a stable

yield of grain crops. It would seem that with astute stewardship on the land it is possible to overcome any difficulties and to constantly obtain stable yields. The task is to apply the know-how of these farms to production as fast as possible.

By the end of this 5-year planning period the yield on all farms in Eastern Siberia is to be raised by 3.5 quintals per hectare, and in Western Siberia by almost 5 quintals. It is practically impossible to achieve that kind of growth in a short time with the traditional methods and procedures of cultivating the land. Extensive introduction of intensive technologies is a mighty instrument for raising the yield of grain crops and improving the stability of cropping. Now that harvesting operations are developing in the field, these conclusions are being confirmed once again. Wherever they are fundamentally concerned with intensification of production things are going better and a greater contribution is being made to the country's grain resources. That is where worthy new and important achievements are being prepared to celebrate an important date—the 70th Anniversary of Great October.

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## POST HARVEST CROP PROCESSING

**RSFSR Deputy Agroprom Chairman on Problems and Prospects for Food Industry**  
18240072 Saratov *STEPNYYE PROSOTRY in Russian*  
No 3, Mar 88 pp 2-6

[Article by V.N. Shcherbak, RSFSR minister and deputy Agroprom chairman]

[Text] Among the diverse and complicated social problems facing the country the June (1987) Plenum of the CPSU Central Committee gave priority to the task of stable supply of food to the country's population—in the necessary quantity, in a broad assortment, and with the proper taste and biological characteristics.

It has to be said that the state of the material and technical base of the food industry of the republic as a whole, including the Volga Region, does not meet present-day requirements and is in need of fundamental retooling. But this does not mean at all that the conditions do not exist at present for dealing with a sizable number of matters related to a sharp increase in food-stuff production.

As a matter of fact, practically every administrative rayon possesses raw materials, above all thanks to its own production of products from animal husbandry and cropping, and it possesses a rather extensive network of processing enterprises and organizations in the trade sector. The economic potential that exists makes it possible even today, if those resources are used, to

strengthen the material and technical base of the food processing industry so as to furnish the public the maximum of food products for which there is an everyday demand.

A fundamental assessment of the state of affairs in the processing branches of the agroindustrial complex was set forth in October 1987 at the conference in the headquarters of the CPSU Central Committee. Strategies and directions were worked out at the same time whereby these branches would develop. The tasks were set straightforwardly: what is to be done at the level of the center, what at the level of the republic, region, oblast, individual enterprise, and work collective.

The processing industry of the Volga Region comprises an extensive network of enterprises producing a diverse assortment of confectionery and macaroni products, vegetable oil, sugar, canned fruits and vegetables, baker's yeast, mayonnaise, nonalcoholic beverages, food concentrates, cigarettes, and many other products of the food industry. There are very large enterprises located in the region which not only cover the needs of the economic region, but also supply products to other republics and oblasts.

For example, the Kuybyshev Chocolate Factory, which was built to incorporate equipment entirely imported, has a capacity of 16,700 tons of confectionery products, and the confectionery factory an output of 23,300 tons per year. The Kazan Order of Labor Red Banner Chemical Combine imeni Vakhitov sells more than 10 products, including more than 15,000 tons of toilet soap and 30,000 tons of laundry soap. Every year 28,500 tons of confectionery products are produced in a large assortment by the Volgograd Confectionery Factory imeni V.I. Lenin. The "Bassol" Order of Lenin Salt Combine, which extracts salt of the highest quality, is located at a unique natural deposit in Astrakhan Oblast. A plant located in Volgograd almost entirely covers the need of the country's medical industry for mustard plasters. In Penza Oblast the Kamenskiy and Zametchinskiy Sugar Mills have an aggregate capacity to process 50,000 quintals of sugar beets per day, and in Saratov Oblast the Arkadak Vegetable Oil Plant is capable of processing more than 150,000 tons of oilseed per day. There are plants for the production of nonalcoholic beverages in practically every oblast seat.

In the Volga Economic Region as a whole (the figures given here and below do not include the bread-baking, meat and dairy, or canning branches) there are more than 200 enterprises in the food and gustatory industry employing almost 50,000 industrial production personnel. The work collectives of the Volga Region have repeatedly been initiators of socialist competition in the food processing industry, and they have had high production indicators. The homeland has given worthy recognition to many of the production front rankers and innovators.

For many years the Kuybyshev Production Association of the Confectionery Industry was headed by Ye.V. Shpakova, Hero of Socialist Labor. Z.P. Shakhova and U.M. Yesina, holders of the Labor Red Banner and "Badge of Honor" orders, work in that collective. R.N. Yelfimova, who holds two orders of Labor Red Banner, has been working for 30 years in the Volgograd Confectionery Factory imeni V.I. Lenin. G.Z. Salimzyanov has been awarded the title of Hero of Socialist Labor and R.A. Rakhmatullina the title of Distinguished Food Industry Worker of Tatar ASSR; both work at the Kazan Order of Labor Red Banner Chemical Combine imeni Vakhitov. Another woman who works in that combine, M.M. Nazipova, has been awarded a commendation of the Presidium of the Tatar ASSR Supreme Soviet "For Attainment of High Production Indicators and Lengthy Conscientious Work Service."

The region's food processing industry has experienced its largest development in the last two 5-year planning periods. In the 11th alone it absorbed 143 million rubles of capital investments, which made it possible to activate additional capacity to produce 22,000 tons of confectionery products per year thanks to construction of factories in the cities of Kazan, Saratov, and Togliatti. Combines producing beer and nonalcoholic beverages were activated in the cities of Ulyanovsk, Naberezhnyye Chelny, and Elista. Fixed productive capital had reached almost 700 million rubles by end 1986.

Since application of the measures of scientific-technical progress to the Volga Region's food processing industry in 1986, production cost has been reduced by a total of about 5 million rubles, and there has been a relative labor saving of more than 500 workers. Fully mechanized shops and sections have been built and are in operation, more than 200 units of highly productive new equipment have been activated, and more than 100 new products have been put into production.

Scientific-technical progress has affected practically all aspects of the production activity of enterprises in the food processing industry—up-to-date methods of storing raw materials and their shipment without packaging; mechanization of manual labor and use of container shipment; application of progressive processes and recipes in the production of foodstuffs using local and nontraditional raw materials and biologically active substances; installation of highly productive new production lines and equipment, including lines and equipment for producing products in industrial packaging and wrapping. Projects have been carried out to apply measures of resource conservation and natural conservation and to master low-waste and waste-free technologies.

Unfortunately, it has to be said that the measures to develop the material and technical base and to resolve the social problems of work collectives in the food processing industry of the Volga Region have been inadequate, and a sizable portion of the problem of a stable supply of many types of foodstuffs to the region's

population still has to be resolved. The reason for this is that the capital investments appropriated have not covered the need, and industry has not been furnished all the equipment it needs, especially processing equipment. In certain cases the urgent needs of the sector were looked on with indifference.

In discussing the problems of the region's food processing industry in summary form, they might be divided into two parts.

The first, which incidentally is typical of the entire food processing industry in the republic, has to do with the fact that the condition of the material and technical base falls far short of meeting today's requirements. A substantial portion of buildings and installations has been in operation for many decades without fundamental reconstruction. Most enterprises, especially the food combines of cities and rayons, are located in converted quarters where the production areas do not allow installation of up-to-date equipment. The processing equipment that has been installed is physically out-of-date and does not in its parameters provide the necessary productivity, product quality, or normal working conditions. As a rule, these capacities are being used in two or three shifts and for all practical purposes they are fully utilized. For example, capacity utilization in the production of granulated sugar, baker's yeast, and salt exceeds 86.4 percent, while in the production of confectionery products and the bottling of mineral water it is all of 90 percent. This does not allow for a sharp increase in the volume of production and labor productivity, for a reduction of the share of manual labor, for an increase in the efficiency of processing the raw material, or for a reduction of losses of the raw material, and as a consequence it places a negative imprint on the food supply. This is a problem that must be solved with sizable capital investment, by construction of new facilities and reconstruction of existing ones.

The region's food industry has been allocated 360 million rubles of capital investments for the period 1986-1990, or 2.5-fold more than was actually assimilated in the 11th FYP. Plans call for augmenting processing capacity by more than 4,000 tons of sugar beets and 200 tons of oilseed per year, and manufacturing capacity by 26,000 tons of confectionery products, 4.2 million decaliters of nonalcoholic beverages, and 30 million bottles of mineral water per year.

In the 13th FYP, capital investments will exceed 400 million rubles. Plans for construction in Astrakhan Oblast include a confectionery factory with an output of 10,000 tons of products per year, a river freight port of the Baskunchak Salt Field and Salt Factory. In Volgograd Oblast the Uryupinsk Oil Extraction Plant and the Volgograd Mustard Plaster Plant will undergo reconstruction, and the capacity for processing oilseed will be increased at the former.

There will be a substantial growth of capacity thanks to reconstruction of the Bogatovskiy Oil Extraction Plant in Kuybyshev Oblast, the Kuybyshev Perfume and Cosmetics Combine, and the confectionery factory and food concentrates plant in Syzran. A yeast plant and sugar mill are to be built in Penza Oblast, and in Saratov Oblast the Balashov Sugar Mill will undergo reconstruction and a plant will be built to manufacture 5 million decaliters of nonalcoholic beverages and fill 20 million bottles of mineral water per year.

This list does not by any means exhaust the measures which have been proposed in order to develop the material and technical base; just like the volume of capital investments, they are not final and will be revised upward if necessary.

The essence of the problems of the second kind lies in adoption of measures that would make it possible to satisfy the need of the region's population for foodstuffs more fully in the very near future. This requires far smaller financial outlays, but a greater organizational effort, motivation, and enterprise on the part of economic authorities and enterprise managers.

Creation of the unified agroindustrial complex has increased the responsibility of the personnel of agriculture and industry for production of the products of animal husbandry and cropping, for guaranteeing their preservation and effective processing, i.e., for the end result of their joint economic activity and the production of finished foodstuffs. The supplies, raw materials, and financial resources have been concentrated in the same hands, and the rights of local authorities have been broadened. All of this affords the possibility of giving priority to those lines of effort which will make it possible to solve the food problems most effectively and in the shortest time.

The transition to the new economic methods, the conversion of enterprises to full cost accounting (khozraschet) and self-financing, which will considerably increase the motivation of work collectives to increase the volume of output, to broaden the assortment of products, and to improve product quality, is supposed to help solve these problems from the economic standpoint.

It has to be acknowledged that so far there has been no noticeable shift observed in the supply of foodstuffs to the economic region's population thanks to their local production. The demand is not being met for the following bread and rolls and confectionery products: rusks, cracknels, spiced biscuits, cream and jelly candies, oriental sweets, as well as canned fruits and vegetables, mayonnaise, nonalcoholic beverages, mineral water, various condiments, flavorings and spices, and many other things, which ought to be produced exclusively, I emphasize, where they are consumed and not shipped in from other regions. All the necessary raw material resources exist for this, and the production base could be built or expanded without major capital outlays.

We can allude to the following facts to confirm what we have said.

In 1986 per capita consumption of confectionery products in the Volga Region was 16.9 kg, differing negligibly from the average for the RSFSR. At the same time, 4,600 tons were annually shipped to Tatar ASSR. It is obvious that goods will continue to be shipped in and out in the future, since they result from the need to expand the assortment. But it is striking that there are large imports of inexpensive confections whose manufacture requires no specialized equipment or imported raw materials, as well as products whose production is based on the simplest technology and raw materials available everywhere like flour, sugar, and certain types of fats. Because of the low level of production per capita consumption of cookies in Penza Oblast today, for example, is only 2.2 kg, which is considerably below the averages for the Russian Federation.

The production of mayonnaise, for which there is a large demand, is simple in its technology and the types of raw materials. But even today it is being shipped into Astrakhan, Penza, and Ulyanovsk Oblasts and Kalmyk ASSR.

Expenditures to ship mineral water into the region are sizable and unwarranted. While organizations in the trade sector filed a request for 115 million bottles a year, in 1986 31 million bottles were filled locally, and 78 million bottles were shipped in from outside. Consequently, the demand has not been fully met by any means. Per capita consumption was only 4.3 liters per person per year. Yet within the economic region only Astrakhan Oblast and Kalmyk ASSR lack prospective mineral water springs.

Yet certain favorable changes in development of the Volga Region's food processing industry have occurred in the last 2 years. For instance, there has been an increase in the mineral water bottled in Kuybyshev and Ulyanovsk Oblasts. But if we look at this volume from the standpoint of meeting requirements, then today they are negligible and are as follows: 15 in Volgograd Oblast, while the requirement is 27; 4.6 and 28.5 in Kuybyshev Oblast, 6.7 and 9.1 in Ulyanovsk Oblast, and 6 and 32 million bottles per year in Tatar ASSR. There seems to be good reason to raise the question of the full supply of every oblast which has springs with mineral water it has bottled itself. The only justification might be for shipping in medicinal and certain other waters in limited amount to round out the assortment.

Similar demands should also be made concerning a portion of the supply of nonalcoholic beverages to the public. According to local requests, the requirement for beverages in the region amounts to 42 million decaliters. In 1986 27 million decaliters were produced and in 1987 about 30 million decaliters. It is not difficult to calculate that on the whole only 70 percent of the requests are being met: in Saratov Oblast the level is 42, in Tatar ASSR it is 45, and in Kalmyk ASSR—49 percent.

What is more, the problem has not been solved of supplying wort for kvass, rye malt to make grain kvass, and there have been complaints about the assortment and quality of nonalcoholic beverages. The way to solve these problems is to reorient enterprises making alcohol, hard liquor, and wine, to increase the number of shifts which bottling lines operate, and to make full use of local types of nontraditional materials. There is also a need for substantial improvement and expansion of the trade network to sell fruit drinks and beverages.

Because of its natural and climatic conditions, the Volga Region possesses large capabilities with respect to delivering products from cropping for industrial processing, especially fruit and vegetables, so that it could manufacture not only a broad assortment of canned goods, but also frozen and dried products and various food and gustatory products, including spices and condiments. This might satisfy not only the requirement of the region, but a portion of the output could be shipped out to other economic regions. It has to be acknowledged that at present these capabilities are not being fully utilized.

It is sufficiently clear from the examples given that the food branches of industry working for local consumption should be developed on a priority and first-order basis. This approach would in fact guarantee dynamic development of the food processing industry as a whole and would make it possible to carry out the Food Program at a faster pace. The thing now is to have a lively organizational effort to carry out the principles of the party and government on questions of food, and its success depends largely on how soon at the various levels—at the center and locally—we free ourselves of the old view of a processing or manufacturing branch as a secondary sphere of the economy.

The national economic plan has called even in the current 5-year planning period for a substantial increase in the volume of production of foodstuffs in the Volga Economic Region. In 1990 production of confections is to exceed the 1985 level by 12.4 percent, the difference for granulated beet sugar is 19.6 percent, and for lump sugar and dry starch it is more than 1.5-fold, for vegetable oil 2.7-fold, for nonalcoholic beverages 3.1-fold, and sevenfold for the bottling of mineral water. There will be an increase in the output of products which have been industrially packaged and wrapped.

Scientific-technical progress in the food processing industry will follow these main directions:

—creation of progressive technological processes in order to intensify production, shorten the production cycle, raise labor productivity, and save on physical and labor resources;

—use of new types of raw materials and supplies, optimum use of scarce raw materials;

- improvement of product quality and creation of new products;
- development and application of efficient methods of combined processing of raw materials and waste-free technologies;
- full mechanization of materials-handling and transportation and warehouse operations on the basis of shipment, receiving and storage of raw materials without containers.

At the confectionery enterprises of the Volga Region lines will be activated to produce and wrap caramels, toffees, cream and jelly candies, rolled-dough varieties of pastries, and molded jellies. The processes of receiving, feeding, and storing raw materials are being mechanized.

At sugar mills the volume of sugar beet storage with forced ventilation will reach 55 percent and that using biologically active chemicals 20 percent of the total.

A process design is to be used for purifying the solution in beet sugar production with cold-hot defecation and progressive predefecation. The application of the measures of technical progress will make it possible to increase the sugar yield to 11.4 percent by the end of 1990.

At enterprises in the oil and fat industry the product assortment is being updated, at the Volgograd Mustard Plaster Plant new medicinal forms of mustard plasters will be manufactured, while at the Kazan Order of Labor Red Banner Chemical Combine imeni Vakhitov a new toilet soap will be put into production containing special additives.

An intensive technology for cultivating yeast is being introduced at the Kuybyshev Yeast Plant, and production processes are being mechanized and automated in tobacco factories.

Enterprises for nonalcoholic beverages and mineral water bottling will be furnished automated lines with a productivity between 6 and 36 bottles per hour.

There will be an increase in the volume of delivery of finished products (confections, nonalcoholic beverages, mineral water, margarine, etc.) to the trade network in display containers to the cities of Volgograd, Penza, Saratov, and Ulyanovsk.

Thanks to application of progressive technology and highly productive equipment the output of high-quality products is to rise 29.5 percent.

Measures will be taken toward further improvement of the organization of production and personnel training and to convert enterprises to self-financing and self-support.

As for matters of a social nature, we would like to say that work collectives of food manufacturing enterprises in the Volga Region, just as in the republic's food processing industry as a whole, are experiencing an acute need for well-equipped housing and places in children's preschool institutions. There have been shortages in the supply of food and shortcomings in working conditions and employee welfare conditions in the workplace. These issues will be dealt with in the comprehensive plans for socioeconomic development of the region, its autonomous republics, its oblasts, and every work collective.

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### Official Action Required on Produce Quality

#### Problem of Excess Nitrate in Plants

18240082 Moscow SELSKAYA ZHIZN in Russian 15  
Mar 88 p 2

[Article by L. Kartseva: "Excess Nitrate"]

[Text] As long as truth keeps silent, rumors speak. You have, of course, heard of the "nitrate threat"? Letters to the editor are arriving in newspapers and magazines. "Is it true that vegetables do not contain vitamins, but only nitrates, and that we are being poisoned by them?" Rumors have a way of making a mountain out of a molehill. It has been rumored that kindergartens and entire military sections have been poisoned by toxic potatoes, and that Uzbek and Turkmen markets are empty of people—there are no hunters of plump melons and watermelons (because these fruits have been raised on nitrates alone). Another thing that is said...

What does it matter what people say as long as the doctors are silent? Or the lawgivers of the fields—the agronomists. And incidentally, why are they silent?

The first specialist to whom I turned for consultation was L. V. Selivanova, director of the department of hygienic nutrition of the Main Sanitary-Epidemiological Administration, USSR Ministry of Health. Hardly listening to my question Liliya Vladimirovna decisively replied:

"Such a problem does not exist! The health ministry has not registered a single case of nitrate poisoning."

Well, if there are none, there are none. All the better for us. Yet where are the rumors originating?...Of course it is stupid to believe rumors. But, in all honesty, we have reason not to trust those who say that there are no problems. Quite frequently this is a sign either of not knowing or of not caring. Quite recently we "did not have a problem" with Lake Baikal, with atomic energy, with drug addiction...We have to make sure we are not fooled again.

What kind of scarecrow is nitrates? Nothing special, simply the salt of nitric acid that is necessary for the nutrition of any plant. Everything is normal as long as the plant removes from the soil the amount it needs for life. But if it takes in more, you and I will have to "digest" these nitrates. But you and I do not need them at all. It is true that in and of themselves nitrates are not toxic, but in the body they are transformed into nitrites, and this is already significantly worse. With the joint involvement of nitrates and nitrites toxic agents—nitrosamines—are formed.

Where do the excess nitrates in plants come from? First and foremost from the excessive application of nitrogen fertilizers, from a lack of balance in the mineral nutrition of the plant. Without trying to be delicate let us state that this sin is on the conscience of agronomists. The pursuit without looking back of large yields "at any price," multiplied by ecological lack of knowledge, has finally resulted in the fact that potatoes, vegetables and fruit supply us not only with vitamins but with dangerous toxic agents as well.

Statistics on nitrate poisoning (as, incidentally, on toxic chemicals) really do not exist within the health ministry. But there is no need to be pleased about this. The secret is a fairly simple one—emergency and clinic doctors simply do not write this as a diagnosis. Special studies are needed.

The laboratory director of the All-Union Oncology Center of the USSR AMN [Academy of Medical Sciences] and deputy chairman of the Committee on Carcenogenic Agents of the USSR Ministry of Health, A. P. Il'nit'skiy, admitted with regret that the question of the degree of carcinogenic danger of nitrates and nitrites and of other toxic agents has been studied very little; as of now a large-scale study has not been carried out in the country.

Someone will probably ask what there is to study. Since it is clear that there is nothing good in nitrates a stop must be put to them, and that is all there is to it! There is probably a "homespun truth" in this unwise thesis. In truth I was more interested in the readiness of our monitoring services to protect us from this evil if it tries to reach our tables. Thus, what do we have in this eventuality?

If we believe A. Ya. Kozelkin, senior specialist of the State Inspectorate for the Procurement and Quality of Products within USSR Gosagroprom, we already have a fairly precise monitoring system. Beginning with the fact that in 1984 the USSR Ministry of Health confirmed norms for tolerated nitrate content in potatoes, seven types of vegetables and two types of melons. This was reflected in GOST. USSR Gosagroprom [State Agro-Industrial Committee] and the USSR Ministry of Health

confirmed the Methodological Instructions on Determining Nitrate Content in Agricultural Products, including the express method of qualitative determination of nitrates at the place of production of the produce and quantitatively—in the laboratory.

Thus, norms do exist, methods—also, GOST—for the taking. What next? Next, according to the Temporary Regulations confirmed last year by USSR Gosagroprom, 1-2 weeks before harvesting kolkhozes and sovkhozes must present samples to the planning-research station for chemicalization in agriculture (zonal agrochemical laboratory). The station makes an analysis and issues a certificate for the products on each field. Or it does not issue a certificate if the vegetable is unsuitable as a food. This is the initial monitoring over nitrate content. Secondary monitoring takes place during the reception of the produce. It is organized by trade-procurement and processing enterprises.

These enterprises have been strictly ordered not to accept non-certified produce. The procurer carries out selective monitoring in his laboratory and if he discovers an excess of nitrates he involves experts from the State Quality Inspectorate in the further fate of the produce. Local sanitation-epidemiological stations are available for consultation.

At first glance we truly can relax. Excess nitrates will not break through such barriers! Someone will detain them.

I shared the enviable optimism of A. Ya. Kozelkin until I visited the receivers of the vegetables—the wholesale-retail associations (ORPOO) of Glavmosplodoovoshcheprom [Moscow main administration for the fruit and vegetable industry]. As we know, we can study the geography of the country by the items available at Moscow's vegetable bases.

"Certificates? I would be satisfied if one-third of our suppliers had them. If, according to the rules, we did not accept products without these documents our storehouses would be empty."

This is what I was told in the Perovskoye, Zhdanovskoye, Timiryazevskoye and Lyublinskoye ORPOO's. Perhaps the produce was all of excellent quality and does not need confirmation in writing? If that were the case! But they go pale at all the bases at the mere mention of "Marneul potatoes" from Georgia—their nitrate content exceeded acceptable levels several times over. Melons from the south, watermelons, early cabbage—all of these arrived with an elevated nitrate content. And basically, without accompanying certificates. Those which did bring this paper (mainly from enterprises near Moscow) contained a laconic note stating that nitrate content was within acceptable limits. But if this produce were tested, the majority would find its certificates to be "forged." Does Soyuzselkhozkhimiya [All-Union Agricultural Chemical Association] know about this? After all, it is its laboratories that issue the certificates for the produce.

S. G. Serebryakov, senior specialist of the Agrochemical Service Administration of Soyuzselkhozkhimiya, states:

"Not all of our agronomic laboratories are equipped with the necessary monitors as of yet. Lying on certificates? This is simple to do—the safe documents issued for one field accompany a completely different product."

So that's the way it is. N. G. Rodina, director of the laboratory sector for storage and processing within Glavmosplodoovoshcheprom herself caught vegetable farmers of Serpukhov's Bolshevik Sovkhoz at this trick.

Well, all right, so the suppliers tricked the first monitors. But ahead lie the second—at the procurer's. Produce that is being shipped a long way, or is earmarked for the national or republic fund must probably be examined by the procurement buro. What does it do? S. G. Serebryakov:

"I myself travelled to the procurement buros of Samarkand Oblast last season; they were sending early cabbage to Siberia. I saw that no one demanded any certificates. It was as if they had never heard of them."

Perhaps the procurement buros do their own monitoring analyses?

"What are you talking about!" A. V. Rymberg, director of the procurement and sales division for vegetables and melons of Tsentrosoyuz [Central Union of Consumers' Societies], burst out laughing in answer. "Scales and baskets—this is what the laboratory equipment of our procurement buros amounts to. Each day they pass hundreds of trucks and dozens of railroad cars. To test even a portion of the produce for nitrates we would need a quantitative express method, and it does not exist."

Wait a minute, wait a minute, a little earlier we learned that methods for determining nitrate content have been confirmed—both laboratory and an express "field" method. This was worked on by seven scientific and semi-scientific institutions and three departments "provided guidance."

The methods are completely possible and good ones. But as for their extensive accessibility—the developers were clearly premature in announcing this, because only highly-trained laboratory workers can master ionometric methods, and such people are hard to find. That is one thing. Industry does not yet know how to manufacure the "heart" of the ionometer, the nitrate electrode—for one good one it produces a dozen poor ones. That is the second thing. Even the capital's Glavmosplodoovoshcheprom was not successful in procuring the ionometers recommended by scientists. The Moscow Inspectorate for Product Quality still cannot equip the analysis laboratory. The necessary equipment has just appeared in the Moscow city sanitation-epidemiological station.

In and of itself the method turned out to be not as "express" as developers see it. Workers of the laboratory of Moscow ORPOO's say that by the time one selects samples and makes an analysis the adroit supplier has time to unload and to return home. As for the express method proposed for the qualitative determination of nitrates at the place of production, its primary shortcoming involves the fact that it points only to the presence of nitrates but cannot indicate whether the quantity of nitrates is large. Without this what kind of analysis can there be? Nitrate-sensitive paper called "indam" simply is not yet being industrially produced. It was not available last season and it is not known whether it will be available in the coming season.

...Shortly stated, the procurement buros have slipped past. Only ORPOO's remain (I will not even mention those cases in which produce moves directly from the fields to the store—what kind of control can there be here!). We already know about the fact that fruit and vegetable associations do not follow the law written for them—to reject produce without certificates. But can they accept produce in which they have nevertheless discovered an excess of nitrates?

Again the answer is a familiar one—what are you talking about! Don't you know what kind of fruit and vegetable shortage we have? Who would take it upon himself to send cucumbers to the dump when they look like painted beauties? The Timiryazevskoye Association attempted not to receive melons with a nitrate content. The rayon SES [Sanitary-epidemiological station] confirmed that the nitrate content was above tolerable levels. And the comrades from Gosinspeksiya for Quality also agreed that it was higher. But the melons...remained in the Timiryazevskoye ORPOO; no one signed a different sentence for them so Moscow residents and their guests in the capital ate them safely (?).

There you have the strictness of GOST. Here is the "precise monitoring system." No, it would be much more beneficial for the health of millions of people to admit that there is simply no strictness and no monitoring system. Worse than that, there is no clear understanding of what kind of system we should have. I am thoroughly convinced that monitoring here must be only on the national level, i.e., outside of the departmental. It must be absolutely independent also from the producers of the products and from the procurers. The monitoring organization must have the right not only to reject but perhaps also to evaluate products according to their ecological purity (abroad this has not been news for a long time).

Here it would be appropriate to use a word that has already entered common usage—state reception [gospriyemka]. We have a dependable barrier against damaged machinery and equipment, mechanisms and parts. Why not provide the same kind of dependable monitoring of produce, the quality of which affects the most valuable treasure of society—our health?

The service of the main state sanitary doctor or Gosstandart [State Committee on Standards of the USSR Council of Ministers] can become the state monitor. It is true that the directors of Gosinspeksiya for the Procurement and Quality of Products did not like this idea. It is ridiculous to place monitoring over such a cumbersome thing on indignant doctors or the standardization service! And in general why not leave well enough alone since we already have a State Inspectorate for Quality.

Of course, the poverty of the sanitation service and the standardization laboratory is an evident reality. But after all it costs nothing to carry out a type of expropriation of capital from some for the purpose of transferring it to others, as long as this is beneficial to the situation. And I feel that there is no real reason to rely on the current Gosinspeksiya. Behind the fine-sounding title—the State Inspectorate—stands only a subdivision of Gosagroprom which guards departmental and agroindustrial interests. We must admit it does an eviable job of guarding. If in the "principled struggle" against abuse of chemicals by agronomists the inspectorate cannot count any victories on its side, in the marketing of unsuitable produce its cooperation is noticeable.

Whose side was Gosinspeksiya on when last fall the interdepartmental conference "elaborated on" the problems related to the hygienic regulation of the allowable nitrate content in potatoes and vegetables? At that time on the insistence of Gosagroprom the conference took into account the "extremely unfavorable weather conditions," as a result of which "a natural increase in the nitrate content of potatoes and vegetables" was noted, as was a decrease in the production of these products. Taking all of this into account it was decided to allow the unloading of potatoes and the main vegetables to consumers of the national fund with a nitrate content exactly three times greater than previously tolerated norms. Objections by representatives of Gosinspeksiya were not mentioned in the conference protocol.

I walked through the offices of several comrades who had placed their signatures on this decision. Didn't they treat the norms, which were diligently developed at one time by respectable medical and other personnel, too slackly (not for the first time, incidentally)? I was reassured—the fact is, they said, that the outside acceptable levels of nitrate content in food products passed here are extremely severe. They pointed "abroad"—there the attitude toward nitrates is more loyal, and in some places the tolerated levels are higher than ours.

Of course it is more evident to specialists. However, if our limitations are truly unreasonably severe, why haven't doctors felt it necessary to reexamine them and to inform us about this, whereas instead they urgently "make them more precise" each time after the nitrates have already gone to the stores?

...The Department of Hygienic Nutrition of the Main Sanitary-Epidemiological Administration of the USSR Ministry of Health finally agreed that the nitrate problem does exist. It revealed and showed a few things. All that was left was to guess why this theme was withheld in a veil of secrecy from the very beginning. Is it because the health ministry itself did not occupy a precise uncompromising position in this situation?

#### Commentary on Nitrate Content in Plants

18240082 Moscow SELSKAYA ZHIZN in Russian  
18 May 88 p 2

[Article by A. Ilin, graduate student, Moscow Agricultural Academy imeni K. A. Timiryazev: "Not Seeing What You Eat..."]

[Text] The idea of creating a state system of controls over the quality of agricultural products, which resounded throughout the article by L. Kartseva, "Excess Nitrate," is more than urgent. Those who insist that such a system already exists are to say the least, not completely accurate. The author of the article demonstrates this well using the example of the state fruit and vegetable trade. But after all there is still another channel by which nitrates and pesticides reach our tables—market trade. Along this channel there are no locks at all.

Mineral fertilizers and toxic chemicals are today generally accessible and many gardeners utilize them with great success. But whereas the agronomic services of enterprises still adhere to some recommendations on dosage and schedules for treating the fields with chemicals, the individual producer is concerned only about productivity and commercial appearance of products.

Last year I had occasion to visit the city market in Anapa. This city is called the all-union children's health sanatorium. The director of the market, F. F. Svetlichnyy, only dreamed about laboratory monitoring of the nitrate content of products. As long as produce is ripe and not rotten—these are the sole criteria.

The Nalchik Kolkhoz Market stands out to its advantage on this background. Here on the initiative of the collective of the laboratory, headed by V. P. Adayeva, a qualitative assessment (according to the principle "large amount—small amount") is made of the nitrate content in potatoes, cucumbers, melons and so forth. If the color reaction indicates "large amount" the produce sample is sent to a toxicology laboratory in the republic's sanitation-epidemiological station for quantitative studies. And here the results of the analysis are obtained. If the misgivings have not been confirmed, the individual receives a permit to sell. If there is an excess amount of nitrate, the laboratory workers are forced to remember that "initiative is punishable." Why? The fact is that rules for veterinary-sanitary expertise were developed at

a time when the problem of excess nitrate accumulation in plants did not exist. This means that a resolution concerning this type of analysis was not included in the rules of expert opinion.

This is the loophole that is utilized by especially pushy traders. "What nitrates do you mean? They aren't in the regulations, which means that it is your invention and you have no right to kick me out!..." One way or another with the help of the police the owner of the poor-quality produce can be thrown out of the marketplace. However, a question arises: Why not finally officially legitimize the laboratory sanctions?

The work being done to develop a constantly-operating service of toxicological monitoring of produce has its difficulties. I would particularly like to single out one of the difficulties. The question is, what should we do about produce that is not safe for the health of people? Use it as feed for animals? But this is also dangerous. Destroy it? Well, an enterprise could write it off, but what about a private individual? If you chase him from the market he will go stand somewhere at an out-of-the-way crossing, at a train station—any city has such clandestine markets. Should we confiscate the unsuitable produce from him? By what law? And how should we confiscate it—without any reimbursement? In practice this is not such an easy question; it requires the help of lawyers.

**Problem of Use of Chemicals in Agriculture**  
18240082 Moscow SELSKAYA ZHIZN in Russian  
15 May 88 p 2

[Article by V. Levchenko, senior scientific worker of the Institute of Government and Rights of the USSR Academy of Sciences, member of the coordinating council on the "Nitrate" problem of VASKhNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin]: "While the Law is Silent"]

[Text] About half a century ago American farmer Edward Faulkner called plow soil cultivation the "madness of a plowman." Decades passed before his warmings were heard and taken into account. I think that the same thing is happening with chemicalization in agriculture. Those who call upon us not to become involved in chemicals are looked upon as Martians.

Agrochemical science and economic organs see a firebird in chemistry, one bearing food in abundance. For this reason it is considered unnecessary to put her in a cage, i.e. to limit it with any kinds of legal regulations. "What do we need lawyers for?" agrochemists usually answer, astounded. "This is between us and the chemists." And they put forth their arguments—due to the use of fertilizers and toxic chemicals productivity increased by this amount, gross output—by so much...I cannot dispute these conclusions. But it is no secret that the growth of chemicalization worsens the quality of agricultural products.

The use of chemical means is subordinate to immediate economic goals, often without a consideration of the reason for which the goal is established. But to a large degree this results from the absence of a law. Whereas in most developed countries of the world (the U.S.A., the FRG, Japan and others) the chemicalization of agriculture is strictly regulated by laws, here it is regulated by departmental documents of USSR Gosagroprom, which is most interested in using agrochemical agents and least of all—in strictly controlling them.

I am not a specialist in storing vegetable products, but as a consumer I am surprised that already in November stores sell rotten potatoes. When did they have time to rot? And what is the price of those toxic chemicals which supposedly protect them from disease? Remember, in 1986 it was announced that the country had harvested a record potato crop, but several months later, in April, we were eating tubers brought from Cuba.

The wintering of cabbage has grown worse and worse, and it happens that onions begin to rot in the railroad cars. Doesn't it turn out that due to immoderate chemicalization we produce an extra quintal in the field only to later lose 2 quintals in granaries?

"In recent years," notes V. G. Mineyev, corresponding member of VASKhNIL, "more and more attention has been focused on the negative indexes of quality of agricultural crops, including the accumulation in them of heavy metals, nitrates and nitroso-compounds." These substances, like antibiotics and toxic chemicals, have become an integral part of the products we consume, which is dangerous for the health of man. "It has been established," underscores N. F. Izmerov, corresponding member of AMN, "that of the total quantity of pesticides that enter the body, 90 percent come from food products and the remainder—from water and air."

In order to combat this phenomenon we need, following the experience of other countries, special laws—a law on the use of chemical agents in the national economy, a law on the protection of the naturalness (safety) of food products and a law on the protection of beekeeping. Imagine a case of fatal poisoning of an individual from "overly chemicalized" products. The prosecution is obligated to begin criminal proceedings against the guilty parties, and the court must punish them according to their crime. There have already been cases of serious poisonings, especially with melon crops, with a fatal outcome. The criminal cases were started due to the deaths, but the fact that the deaths were the result of "overchemicalization" of a food product is secondary to both the prosecutor and the judges. This is understandable—since there is no law on food product safety, there can be no legal proceedings!

**Monitoring for Nitrates**

18240082 Moscow SELSKAYA ZHIZN in Russian  
18 May 88 p 2

[Article by I. Nishchiy, director of the laboratory on plant biochemistry of the Moldavian Scientific Research Institute for Field Crops: "Laboratory in the Pocket"]

[Text] We are reporting that our Seleksiya NPO [Scientific-Production Association] has begun to produce the Indam indicator for the qualitative determination of nitrates in food products and feeds. It can be used not only by producers and procurers but also by regular consumers. In 1-2 minutes, having gone into a store or market, the consumer puts sensitive paper on his hands and can thus determine the presence of nitrates in a kilogram of any vegetable or fruit.

Agricultural organs, trade organizations, interested organizations, and the owners of fruit and vegetable plots can give us orders for the manufacture of indicators, noting the most convenient time for pick-up—the normal effectiveness (time of serviceability) of the Indam is 100 days.

Our address: 279200, MSSR, City of Beltsy, 1 Zelenaya Street.

[From the editors] Unfortunately, we cannot report to readers on the reaction of Gosagroprom and the USSR Ministry of Health to the article "Excess Nitrate." They have not yet informed us of this. But let us hope that both departments will after all remember the accepted order for reacting to criticism.

8228

**LIVESTOCK AND FEED PROCUREMENT**

**Interfarm Livestock Enterprises Losing Money**

**Why Interfarm Enterprises Are Unprofitable**  
18240080 Tashkent SELSKOYE KHOZYAYSTVO  
UZBEKISTANA in Russian No 10, Oct 87 pp 15-17

[Article by Z. Sabirova, candidate of economic sciences and recipient of the prize of the UzSSR Academy of Sciences: "Why are MKhP [Interfarm Enterprises] Unprofitable?"]

[Text] Many years of experience speak of the fact that the main way to increase the effectiveness of livestock raising is to continue to increase production specialization and concentration on the basis of interfarm cooperation.

Moreover, during the last 25 years of their existence in the republic, interfarm enterprises, which combine the resources of kolkhozes and sovkhozes, have opened up the way for the interweaving and confluence of two forms of property, thereby providing a great impulse for accelerating the social development of the village.

Interfarm cooperation became most widespread in meat and dairy livestock raising. The predominant number of interfarm enterprises in the republic is involved in beef production and in raising heifers. There are also a number of interfarm enterprises which fatten several types of animals.

In 1986 117 MKhP's were in operation involved in the fattening and intensive raising of cattle and in the special-purpose raising of heifers; there were also 1,109 cooperating enterprises, including 806 kolkhozes. As a rule all of their indexes were significantly better than those of small kolkhoz and sovkhoz farms. At the present time there are a number of MKhP's with very high and stable economic indexes, as for example Pastdargomskoye MKhP of Samarkand Oblast, Progress MKhP of Syr-Darya Oblast and others.

At the same time the potential possibilities inherent in interfarm livestock enterprises are not being utilized fully by far. If that is not enough, in recent years they have tolerated great losses, which is related to a series of serious shortcomings and violations in implementing the process of interenterprise cooperation. Thus, in 1982 there were three unprofitable MKhP's in the republic (Dzhambayskoye, Koshkupyrskoye and Dzhizakskoye), whereas by 1985 their number had increased to 32. Total losses reached 4,499,000 rubles. If we do not take quick and energetic measures, the number of unprofitable livestock-raising MKhP's will continue to increase in the future.

In order to single out the reasons for the unprofitability of MKhP's we must first return to 1978-1979. During that period, adhering to the special decisions of the CPSU Central Committee and the USSR Council of Ministers, the republic did a great deal to develop interenterprise cooperation. In 1979 there were 90 MKhP's which produced 18,700 tons of weight gain; average daily weight gain comprised 431 grams and expenditures of labor and feed units per quintal of weight gain—24.9 man-days and 12.3 quintals respectively. Production profitability reached 36.2 percent, i.e. the effectiveness of the MKhP was proven in deeds. Such results became possible on the basis of strict adherence to all rules and regulations found in the Resolution on the Interfarm Enterprise. Of no little importance as well was the fact that party and soviet organs of the republic and oblasts were very interested in the successful development of the MKhP at that time.

However, in subsequent years MKhP workers more and more frequently met with violations of the principles and demands of interenterprise cooperation, with an incorrect understanding of this cooperation and with an underestimation of the promising nature of this course.

We know that the existing model resolution states that on lands allocated for the MKhP feed must be produced to satisfy its own needs. Despite this, the fields that have been allocated to MKhP's now cultivate cotton and spike

crops; moreover, the workers of these enterprises are involved in the production of cocoons. State plans are established for MKhP's for the delivery of certain products, which foreordains the artificial feed shortage. Thus, despite the fact that animals were in need of valuable protein feed, Komsomolskoye MKhP in 1983 delivered 271 tons of grain to the state, and in 1985—71 tons of grain, practically everything that was produced here. In 5 years of the 11th Five-Year Plan the MKhP's of Syr-Darya Oblast delivered a total of 2,324 tons of raw cotton and 651.5 tons of grain and other products. In this way MKhP workers sometimes, especially during intensive periods of the year, are put into a position in which the fulfillment of state quotas related to the delivery of secondary products becomes their main focus...

In recent years with the appearance of state complexes for the fattening and intensive raising of cattle kolkhozes and sovkhozes have become more interested in delivering cattle for fattening to such enterprises, ignoring the MKhP.

In most regions one of the reasons for the unprofitability of the MKhP is the fact that kolkhozes and sovkhozes—participants in cooperation—have delivered the best calves to state complexes, and have sent MKhP's the rejected animals.

This situation can be explained by the fact that in the enterprises of Uzglavzhivprom [Uzbek Main Administration for the Livestock Raising Industry] feed supplies are guaranteed and work is carried out accurately in accordance with established schedules.

At the present time in connection with the changes that have taken place within the apparatus of the republic's Gosagroprom [state agro-industrial association] the administration of Uzmezhkhozzhivpredpriytiye [Uzbek Interfarm Livestock-Raising Enterprise] has been reorganized and the administration of the MKhP has been transferred to the livestock-raising department of Gosagroprom as regards the technological line, and to the economics department as concerns the economic section. At the same time, oblast administrations of interfarm livestock-raising enterprises have been retained.

We know that with the creation of the RAPO [Rayon Agro-Industrial Association] the MKhP for the fattening and intensive raising of cattle and for the special-purpose raising of heifers became a part of it. This also complicated the operations of interfarm enterprises. The fact is that RAPO specialists have a poor idea of the integration processes that are taking place in livestock raising in the republic, which is attested to by the following characteristic facts. In dealing with a number of organizational-economic questions within the division on promising plans of socio-economic development for the RAPO that had to do with the MKhP, a faulty tendency has been observed. The RAPO for all practical purposes takes upon itself all of the functions of interfarm enterprises,

thus seemingly gradually eliminating the problems of their continued development. Naturally this kind of concept and formulation of the situation does not correspond to the interests of developing industrial livestock raising.

Thus, for example, the oblast interfarm livestock-raising enterprise of Syr-Darya Oblast has planned the delivery of 500 head of livestock to enterprises participating in cooperation from the Khavastskoye MKhP. But the RAPO, ignoring the plans of the MKhP, established its own plan for the enterprises—250 head. As a result in 1986 the Khavastskoye MKhP for the raising of replacement heifers was forced to significantly hold over 1,000 head, which resulted in the overexpenditure of feeds and in considerable losses.

In a number of MKhP's specialists cannot develop a sowing structure for their own lands. The RAPO plans for them the necessary area in melon crops, sugar beets and other crops while at the same time livestock farmers feel it is more expedient to cultivate high-protein legume crops such as soybeans on those fields.

It is essential to note that a no less important question for the MKhP is that of feed supplies. Previously it received feed and material-technical resources allocated by the corresponding republic organs through oblast interfarm livestock-raising enterprises. Now, however, all of these funds have been transferred to the RAPO, the main goal of which is to meet the needs of its own enterprises—the farms of the rayon's sovkhozes and kolkhozes. With this type of distribution of feeds and technology the MKhP receives almost nothing...

At one time in connection with the expansion of land area for an enterprise's own feed production in Samarkand, Khorezm, Fergana and Syr-Darya oblasts shareholding enterprises were completely freed of the delivery of green and succulent feeds to the MKhP. The fact is that these items had to be shipped large distances, which greatly decreased feed quality and required great transportation expenditures.

Later the needs of the MKhP were fully satisfied through its own production (60-70 percent) and through Gosfond [State funding association] (30-40 percent). In this case 1 ton of cotton husks cost it 2 rubles. Now, when the MKhP is no longer able to utilize state feeds, it buys a portion of its feed from enterprises that participate in cooperation. Now 1 ton of such feed costs 60-70 rubles. This is the main reason for a decrease in production profitability in many MKhP's.

In some of the republic's MKhP's the extreme distance of lands which are used to grow feeds has a negative effect on the production economy. The existing structure of commodity production in livestock raising also has a negative effect. Today the MKhP's of Andizhan, Bukhara, Kashka-Darya, Sur-Darya and Navoi oblasts still preserve market branches such as poultry raising, hog

farming and sheep raising. Being small they are usually unprofitable. Thus for example, in 1985 production profitability from hog raising equalled 38 percent on the average for the republic's MKhP's; in poultry raising this index equalled 30.2 percent.

Also alarming is the fact that interfarm enterprises are gradually seeming to lose the significance they had during the first years of their existence. Scientists are giving less and less attention to them in their articles and research; party and management organs of UzSSR Gosagroprom and oblast agroproms render possible aid to MKhP's as a last priority after dealing with the problems of kolkhoz and sovkhoz farms. With their current status oblast interfarm livestock-raising enterprises of the republic cannot fully utilize their previous rights, the exercising of which at one time yielded good results.

At the same time it is important to clearly understand that the most favorable conditions for the further development and implementation of the potential of integration processes in livestock raising are created only within the framework of the RAPO. However, the RAPO cannot voluntarily solve the organizational and socio-economic problems of oblast interfarm livestock-raising enterprises and of MKhP's themselves. Here a strict mutual tie and mutual agreements must exist for both parties.

It is appropriate to note that the MKhP's that are operating at the present time were created under conditions of the branch method of management and for them the organizational base was the administrative region.

Because a new type of enterprise—complexes for production output on an industrial base—is being developed now in the republic the necessity arises to clearly determine which branches of livestock raising must be developed in each RAPO enterprise and which of them should be organized on an inter-rayon basis.

Research and progressive experience confirm that in the future it would be expedient to concentrate all MKhP's of rayon agro-industrial associations in specialized oblast associations. With this type of solution a specialized branch of livestock raising—complexes for the production of beef or for the special-purpose raising of heifers—will be organized in every oblast in the near future and the MKhP will be a part of this branch. Moreover, every complex will work according to a production plan, which will be a part of the industrial-financial plan of OAPO [Oblast agro-industrial association]. Here there must be strict adherence to the mutual ties and coordination of plans for the specialized complex within OAPO. At the same time the centralization of administrative and economic functions must facilitate the integral coordination of the interests of the complex with the cost-accounting interests of every MKhP that belongs to it.

An analysis of the accumulated experience shows that we should look at the development of the MKhP as a progressive process; we need only to secure the indicated positive tendencies and then we can consider this direction an important strategic task.

For the continued improvement in the effectiveness of the MKhP it is essential to reestablish all of the rights and obligations of oblast interfarm livestock-raising enterprises, which are growing weaker from day to day; these enterprises must themselves receive and distribute the feeds and technology that are allocated by republic organs. Oblast higher-standing organs must help oblast interfarm livestock-raising enterprises in various ways in order to eliminate production losses and to put them on a path of new intensive development.

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#### Follow-Up Commentary

18240080 Tashkent SELSKOYE KHOZYAYSTVO  
UZBEKISTANA in Russian No 3, Mar 88 p 24

[Article by V. Antonov, Deputy Chairman of UzSSR Gosagroprom: "Why is the MKhP Unprofitable?"]

[Text] V. Antonov, Deputy Chairman of UzSSR Gosagroprom, has responded to the article entitled "Why is the MKhP Unprofitable?" published last year in issue Number 10, which discussed violations in the principles and the needs of subdivisions of the republic's interfarm cooperatives.

At the present time there are 114 interfarm enterprises in operation in the republic with production capacities for 207,100 livestock places.

In 11 months the state received 69,100 head of cattle with a total live weight of 25,300 tons and an average weight of 370 kilograms per head; the average delivery weight of one head of cattle in Fergana Oblast equalled 456 kilograms, in Tashkent Oblast—395 kilograms and in Namangan Oblast—392 kilograms. The annual plan for the sale of livestock was fulfilled by 105 percent.

As a result of the measures taken to improve the conditions for feeding and maintaining cattle many enterprises achieved high indexes as concerns weight gain during fattening and intensive raising. In the enterprises of Tashkent Oblast average daily weight gain of cattle equalled 502 grams, in Fergana—509 grams and in Andizhan—460 grams; at the same time there was a significant curtailment in the expenditure of feed per unit of production. In 10 months of 1987 profits in the interfarm enterprises of Fergana Oblast equalled 4.6 million rubles, in Namangan—1.4 million rubles and in Khorezm—0.9 million rubles.

At the same time in a number of interfarm enterprises available possibilities are not being used adequately for the purpose of increasing meat production, of improving the condition of cattle submitted to the state and of improving branch profitability.

Production capacities are being utilized inadequately in interfarm enterprises: in Andizhan—by 35 percent, Syr-Darya—48, Kashka-Darya—51 percent. The main reason for this is the unavailability of land for feed crops. Only 60.7 percent of the feed used by MKhP cattle comes from the MKhP's own production. In many interfarm enterprises the herd is supplied primarily with purchased feed, which results in higher production costs and in losses when it is time to sell the products. At the

same time in a number of oblasts measures are being taken unsatisfactorily to strengthen the feed base of state livestock-raising complexes and interfarm enterprises.

Whereas the task for 1987 consisted of allocating 7,820 hectares of land for interfarm enterprises, actual allocations equalled 3,545 hectares, or 45 percent.

UzSSR Gosagroprom has taken specific measures to further develop the interfarm enterprise for the fattening and intensive raising of cattle; additional allocations of land and the building and renovation of livestock-raising facilities are planned.

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8228

## BUILDING MATERIALS

UDC 666.940

### Widening Cement Assortment Reduces Production Resources Intensity

81442787 Moscow TSEMENT in Russian No 3, Mar 88  
pp 2-3

[Article by Z. B. Entin and L. S. Filippova, candidates of engineering sciences, of NIItsement [State All-Union Scientific-Research Institute for the Cement Industry]: "Widening the Variety of Cements Reduces the Resources Intensiveness of Producing Them"]

[Text] The Main Directions for the Economic and Social Development of the USSR for 1986-1990 and for the Period up to the Year 2000 set the following tasks for the industry:

—in every possible way speed up scientific and engineering progress and raise decisively the role of science and engineering for a qualitative transformation of industrial forces, for converting the economy to the rails of comprehensive intensification, and for increasing the effectiveness of social production;

—execute a set of measures for improving production technology;

—provide for the universal introduction into production of resource-saving types of equipment and technology, the comprehensive use of raw materials, the replacement on a broad scale of natural materials by synthetics in production consumption, a reduction in losses of raw and other materials, and improvement in the use of secondary resources;

—bring cement production up to 140-142 million tons in 1990 and improve its quality; and

—use more completely incidentally mined materials, secondary raw materials, slag, and other waste for producing building materials.

The 7th All-Union Scientific and Technical Conference on Cement Chemistry and Technology, which is being held by USSR Minstroymaterialov [Ministry of Construction Materials Industry], USSR Gosstroy, and the VKhO [All-Union Chemical Society imeni D. I. Mendeleyev in Cherkessk on 26-27 April 1987, will help our branch to realize these tasks.

This issue of the journal is dedicated to the forthcoming conference.

In 1986 the cementmakers achieved some successes in improving the quality and increasing the variety of output produced.

Thus, production volume for cement of 500 grade and higher was 22.6 percent of total output, and the share of output of higher quality category reached 44 percent.

Our industry's main product, as before, was portland cement (71 percent); the share of portland slag cement was 26.0 percent and it was reduced by 1 percent below 1985's output. In considering that this is the least energy-intensive binder, such a situation cannot be considered progressive. In some economic regions portland-slag cement is not being produced at all.

The share of portland-pozzolan cement in recent years has been reduced steadily; in 1986 it was 2.7 percent versus 3.7 in 1980 and 5.3 in 1975. The demand for this binder is not being completely satisfied at present. Production of this cement has been concentrated basically at four enterprises: the Bryansktsement and Mordovtsement associations, the Karadag plant and the Ararat combine. Nine other enterprises make this cement in small amounts. So in most economic regions there is not enough of it and in some it is in surplus.

The products mix of cements (according to standardizing documentation) consists now of 60 types and grades, including 34 types and grades for general-construction purposes and 19 for special purposes, and also 16 varieties of oil-well cement.

It should be noted that the broad products mix of cements for general-construction and special purposes is called for by the standard documentation of most industrially developed countries, where a trend toward a substantial expansion in the varieties of these binders and an increase in the number of types and grades are observed. This was occasioned by the necessity for saving fuel and power resources and for satisfying construction's diverse requirements.

Thus, in the USA, where until now the division of cements by grades has not been introduced, standardizing documentation calls for the output of 44 varieties of binder for general-construction purposes (not counting decorative and high-alumina cements) and 16 varieties of oil-well cement.

A large number of types and grades of cements for general-construction purposes is typical also for EEC countries, where in recent years the production of multiple-component cements has been growing. Thus, Spain's standards calls for 63 types and grades of cement for general-construction purposes, France 38 and the FRG 35.

In CEMA member countries the variety of cements is also extremely wide. For example, Hungary has standards documentation for 32 types and grades, Bulgaria 27.<sup>1</sup>

The main portion of our cement industry's output is made up of multiple-component cements, the fuel costs for the production of which have been reduced by 25-30 percent (by 5-6 million tons of standard fuel equivalent per year). The 27th CPSU Congress's decisions contemplated a further growth in the production of low-energy cements.

In developed capitalist countries, especially in EES countries, multiple-component cement production also is increasing constantly. According to Tsembyuro [CEM-BUREAU] data, the average introduction of additives into cement in 1983 was 17 percent, while in 1990 it will grow to 23 percent and in the year 2000 to 30 percent.

According to Tsembyuro's forecast, in the year 2000 the share of multiple-component cements throughout the whole world will be 75-80 percent of the total amount of cement, and neat-clinker cements will be viewed as special-purpose binders. An increase in the products mix of cements in EEC countries is linked precisely with expansion of multiple-component binder production,

Thus, the agreed draft of the European Standard EN 197-1 [2] calls for the output of eight basic varieties of binder:

- portland cement, in which up to 5 percent of active mineral additives or fillers can be introduced;
- portland cement with additives of slag, pozzolan, fly ash, limestone or combinations thereof (five varieties), and in this case the active mineral-additive content can be from 10 to 35 percent, filler additives up to 20 percent;
- slag portland cement which contains from 36 to 80 percent slag; and
- pozzolan cement with the introduction of up to 40 percent of active additives, aside from slag.

Up to 5 percent of the active mineral additives can be replaced in all binder varieties by filler additives.

The draft of the standard calls for the division of cements by strength into two classes—with activeness of at least 32.5 and 42.5 MPa, and each of these are divided into two subclasses—with normal and rapid hardening. Thus, the proposed products mix includes 32 types and grades of cements for general-construction purposes.<sup>2</sup>

In countries where the division of cements by grade is called for, the standards usually establish from three to five grades (CEMA member countries, the FRG, France and others).

Five cement grades are also called for in the USSR (300, 400, 500, 550 and 600), our actual proportion of high-grade binders (more than 20 percent), not to mention absolute volume, being higher than in most industrially

developed countries. This leads to a disparity in the grade structure of cements and concretes, great losses of binder, and unjustified consumption of fuel and electricity.

Uneven geographic distribution of the production of low and high grade cements also complicates the situation. While the average share of 500-grade binder is 20 percent, in the European part of the country it is about 25 percent, in the Urals 15 percent, and in the eastern regions only 12 percent. A severe shortage of 500-grade cement is being observed in Central Asia and the Transcaucasus. Enterprises of these regions need the help of the industry's science in mastering the production of high-grade binder. It is especially important to arrange the output of such cement on high-capacity industrial dry-method production lines.

According to NIIZhB [Scientific-Research Institute for Concrete and Reinforced Concrete] data, total output of 300-grade cement in the country is 4-5 million tons lower than the requirement for it. Here its production is concentrated in three or four economic regions of the country, at enterprises that gravitate toward large metallurgical combines (the South Urals, Donets-Dnieper and other economic regions). At the same time, in some parts of the country—the Baltic, the Northwestern and the Far Eastern regions, and also in the Belorussian SSR and certain other economic regions—cement of the 300 grade or for mortar is not produced at all. Therefore, expensive, energy-intensive high-grade cements are being used for low-grade concretes and mortar.

This problem can be resolved by expanding the products mix of additives used in cement, mainly local raw materials—ash from TES's, filler additives, and so on. It is planned to bring the consumption of granulated slag and of ash-and-slag wastes of TES's up to 27.0 and 4.2 million tons, respectively, by 1990.

The products mix of special cements produced in our country is extremely wide. In 1986 the production of sulfate-resistant portland cement with mineral additives and of portland cement produced in accordance with the British standard, and of oil-well cements, sand cement and prestressing cements, as well as cement for vibro-hydraulically pressed pipe and other effective types of it, increased substantially.

The diversity of cements allows not only construction needs to be better met but also fuel and power resources to be saved.

We are paying great attention to oil-well cement production—an important element of the power-engineering program. At present, new standards are in operation for this binder (classification, specifications, and methods of use). But the demand for special cements still is not being met completely, the main problem being improvement of the geographical siting of facilities for producing them.

Introduction into the industry of new and improved types of cements obtained as a result of scientific developments is of the greatest significance.

The use of krents will enable the expanded production of high-grade cements to be organized on the basis of ordinary technology and the quality of ordinary cements to be raised, yielding substantial energy savings. However, the introduction of this development is going very slowly.

And the output of plasticized cement with superplasticizer LSTM-2 is not being expanded adequately, although from 7 to 15 percent of binder can be saved by using it.

In 1986 the output of prestressing cements, which enable articles of high-density to be obtained, was 160,000 tons versus the requirement of about 500,000 tons announced by USSR Gosstroy.

Especially fast hardening cements based on sulfated and halogen-containing clinker, which enable the time for heat-and-moisture treatment of concrete to be shortened, and in some cases even to dispensed with it, are being produced only in test-batch amounts.

In conclusion, I would like to say something about certain other matters associated with the products mix of cements and output quality.

At certain plants with low industrial discipline, there is a trend toward a reduction in clinker activeness under the pretext of saving fuel, which also says something about the low skill levels of supervisors and the enterprises' process engineers. Analysis indicates that at all enterprises where clinker activeness grows, specific fuel consumption during roasting not only does not increase but, on the contrary, it is reduced.

Reduction in clinker activeness necessitates a reduction in the introduction of additives, and this, in turn, leads to still greater overconsumption of fuel and power resources.

That can also be said about the tendency of certain enterprises to fail to grind the cement finely enough, which also leads a to reduction in the introduction of additives, incomplete use of the clinker's chemical activity and, as a consequence, overconsumption of fuel and electricity, and also of cement in construction. It must be noted that the fineness of samples of cements which come from abroad is, as a rule, much higher than that of domestic cements.

At present, USSR Gosstroy has confirmed a program for the wide development of finely ground multicomponent cements.

All the problems touched on here have been reflected in the comprehensive Tsement-90 program, the successful fulfillment of which will help promote a considerable saving of fuel and power resources in the cement industry.

The necessity for expanding and improving the variety of cements and also of improving their construction-engineering properties requires an expansion of research in the chemistry and technology of binding materials.

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11409

## POLICY, ORGANIZATION

**Text of Draft Consumer Co-op Charter Published**  
18270063a Moscow SELSKAYA ZHIZN in Russian  
17 Jun 88 pp 2-3

[Unattributed text "Draft Model Charter for a Consumer Society (Cooperative)"]

[Text] Together with the production societies the consumer societies (cooperatives) are the main type of cooperatives functioning within the socialist cooperative system. They are set up in the sphere of circulation and are associated with this sphere through the production of commodities and provision of services, and they may be combined on a voluntary basis into unions (or associations) within rayons and oblasts (or krayas), autonomous and union republics and throughout the country, forming the consumer cooperative system.

The economic, organizational and legal conditions for the activity of the consumer cooperatives (consumer societies) are defined by the USSR Law on Cooperatives.

The main tasks of the consumer cooperative system are as follows:

—to set up and develop in villages and cities a network of retail trade and public catering enterprises and, together with state trade enterprises and organizations, to provide their members and the public serviced, foodstuffs and nonfoodstuff commodities that they themselves produce or that are purchased from production cooperatives, state enterprises and citizens, and also goods obtained from state market allocations;

—to purchase from the public and from kolkhozes and sovkhozes agricultural produce and raw materials, items from private subsidiary enterprises and undertakings, wild fruits, berries and mushrooms, and raw plant materials for subsequent technical processing as medicines and marketed in the retail network, and also to supply industry;

—to organize the production of foodstuffs and nonfoodstuff commodities from agricultural and other local raw materials purchased, and also from centralized state allocations and funds acquired under the procedures governing the wholesale trade in raw material and materials;

—to provide various kinds of services of a production and personal nature for the public.

The activity of the consumer cooperative system is based on the principles of voluntariness, individual or collective membership, the combination of personal, collective and state interests, economic independence, material interest and social justice, and the direct

participation by members of the consumer society in the management of its affairs on the basis of cooperative democracy and socialist legality.

Proceeding from the principles of cooperative democracy, the consumer societies and unions set up their own elected representative organs.

A congress of the USSR consumer cooperative system and congresses of the republic (union and autonomous), oblast and kray systems of consumer cooperatives are convened at least once every 5 years, and meetings of fully empowered regional consumer unions at least once annually.

The congress of the USSR consumer cooperative system considers questions of its public and economic activity, adopts, alters and augments the Model Charter for the Consumer Society and the model charters for rayon, oblast (kraj, republics) unions of consumer societies, and the Charter of the Central Union of Consumer Cooperatives (Tsentrsoyuz), and also other enforceable enactments concerning the most important questions in the development of the consumer cooperative system.

### I. General Provisions. The Aims and Tasks of the Consumer Society.

1. The consumer society is a voluntary association of citizens living or working in (here insert the name of the populated points, enterprises and organizations) in (here insert the name of the rayon) in (here insert the name of the okrug, oblast, kraj or republic).

2. In its activity the consumer society is guided by the USSR Law on the Cooperative and other legislative acts, and by its own charter, and it is a corporate body and it operates on the basis of independence, self-management and self-financing.

The consumer society has an independent balance sheet and a seal with its name.

Together with the state enterprise (or association) the consumer society is a main element of the unified national economic complex and at the same time a main element in the system of consumer cooperatives.

The board of the consumer society is located in (here insert the name of the populated point).

3. The consumer society is a member of the (here insert name) union of consumer societies. In accordance with its own aims as defined by the charter, it may also enter into contractual arrangements as a member of the agro-industrial and other associations and organizations while retaining its own complete economic independence and rights as a corporate body.

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4. In order to bring the activity of the consumer society closer to its own members, organs of self-management may be set up in territorial sectors—sector committees—which will carry on work to recruit cooperative shareholding members to manage the public and economic activity of the consumer society, strengthen its ties with the local soviets of people's deputies and the kolkhozes and sovkhozes and other enterprises, and organize control over the work of the enterprises of the consumer society that directly provide services for the public on the territory of the sectors.

5. The main aim of the consumer society is to satisfy to the fullest extent possible the demand of its members and the population that it serves for consumer goods and services and to help in the development of their labor and social activity and in improving their material well-being and cultural level.

In order to fulfill this aim the consumer society acts as follows:

a) organizes trade services and public catering for the population and offers a broad system of services for the public;

b) draws into retail trade products manufactured by cooperatives producing goods, and by citizens engaged in individual labor activity, and also on the basis of direct ties, output produced by state enterprises;

c) develops the production of foodstuffs and nonfood-stuff commodities at cooperative industrial enterprises, its own fattening houses, and other subsidiary farms;

d) expands the material-technical base for procurements and the processing of agricultural output and raw materials and brings its activity as close as possible to the population and the places where agricultural output is being produced, and sets up a comprehensive system for procurements and processing and marketing services making it possible for workers in the countryside and other citizens working private subsidiary plots to sell their excess agricultural produce in situ and acquire essential commodities;

e) helps to develop in rural localities cooperatives and citizens' private subsidiary plots to rear and fatten cattle, poultry and rabbits and produce vegetables, fruit and berries, and also carry on primary processing with subsequent delivery to consumer societies on a contractual basis;

f) insures efficient cooperative farming and intensification in farming, higher labor productivity among workers, and the economical use of material reserves, introduction of the achievements of scientific and technical progress and advanced experience, and shows constant concern for the social development of its own members and the labor collective;

f) develops self-management and cooperative democracy in every possible way.

### II. Membership and the Rights and Obligations of Members of the Consumer Society.

6. Membership in the consumer society is voluntary. Any citizen who has attained the age of 16 years and expresses a desire and is capable of taking part in fulfilling the aims and tasks of the consumer society may be a member.

7. The admission of citizens as members of the consumer society is done through written application from the applicant by authorized persons on the board or by the sector cooperative committees no later than 15 days from the date of application.

Each person admitted as a member of the consumer society pays an entrance fee of (here insert number) rubles and a minimum share fee of (here insert number) rubles. The maximum amount of the share contribution is not restricted.

For persons without independent earnings, and also for persons receiving a state allowance, pension or student grant, a privilege share fee of (here insert number) rubles is established.

An applicant becomes a member of the consumer society after payment of the entrance fee and minimum share fee and his acceptance as a member by the sector cooperative committee. Each new member receives a member's card.

8. A member of the consumer society has the following rights:

a) to participate in the activity of the consumer society and the management of its affairs and to elect and be elected to the management and control organs, and to introduce proposals to improve the activity of the consumer society and eliminate shortcomings in the work of its organs and officials;

b) to acquire on a preferential basis over other citizens goods in the cooperative stores, and to take advantage of the opportunities for guaranteed marketing on a contractual basis of the output from private subsidiary plots and activities through the procurement and trade enterprises of the consumer cooperative system;

c) to receive a share of the profits distributed to the members of the consumer society according to their share holdings;

d) to take advantage of the services of the consumer society and the privileges and preferences envisaged for share-holding members, including in the form of retail discounts for goods and services sold, and also privileges

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with regard to acquiring goods on credit. These privileges and preferences are offered through the income (profit) derived from production, trade and other kinds of activity;

e) to obtain from the elected organs and officials of the consumer society information any any matter concerning its activity;

f) to be accepted on a priority basis for work in the consumer society in accordance with education and occupational training, giving due consideration to the need for personnel;

g) to have priority in acquiring shares and other securities issued by the consumer society or cooperative union;

h) to pass on to cooperative enterprises output and raw materials for processing on a customer-supplied basis;

i) to use the social and cultural facilities created by the consumer society and cooperative unions, and also such facilities created severally with other organizations and enterprises, and to participate in clubs according to his interests, and also amateur dramatic societies, sports sections and so forth;

j) to be sent to higher and secondary specialized training establishments of the consumer cooperative system, including rights to an economic grant.

The board of the consumer society may establish other privileges for share-holding members, and also favorable conditions when using the services of its own enterprises.

9. A member of the consumer society has the right to resign from it by submitting a written statement that must be reviewed by the sector committee or board within one month. When this occurs the entire amount of the share contribution and the amount of profit calculated for that contribution must be returned to him at the end of the economic year, no later than 1 month following confirmation of the annual accounts. The entrance fee paid by the member to the consumer society is not refundable. Transfer of share contributions is not permitted. When a member of the consumer society moves somewhere else to live his share contribution is transferred to the consumer society at the new place of residence. Unclaimed shares are transferred to fixed capital.

10. A member of the consumer society has the following obligations:

a) to observe the charter of the consumer society and comply with the decisions of the general meeting and the elected organs of management and control;

b) to fulfill his obligations to the consumer society connected with property participation or other participation in its activity;

c) to participate actively in the management of affairs of the consumer society and to reveal shortcomings in its work and strive to eliminate them;

d) to protect and preserve state and cooperative property and not to permit any negligent or careless attitude toward the general good.

A member of the consumer society is liable with regard to the debts of the consumer society to the extent of the minimum share amount.

11. Measures of public influence will be implemented against members of the consumer society violating this charter (warnings, public censure). A member of the consumer society who permits gross and repeated violations may be expelled from the consumer society.

The question of expulsion of members from the consumer society is resolved by the sector cooperative committee. An expulsion decision may be adopted by at least a two-third majority vote of those members of the sector committee present during consideration of the matter. An expulsion decision may be appealed at a sector meeting, to the board of the consumer society or in the courts.

12. In addition to private citizens, the consumer society may have collective members of the cooperative producing goods and providing services, and other enterprises and organizations.

Collective members admitted pay an entrance fee and take out shares in amounts agreed with the consumer society.

A collective member enjoys the right to use the various services of the consumer society (leasing property that is part of fixed capital, obtaining loans to form fixed and circulating capital, acquiring raw materials and materials, transport services and so forth), and also its help as a consultant in all matters relating to its activity, including legal defense, and to delegate its own representatives to meetings of proxies in the consumer society.

A collective member is obligated to comply precisely with the agreement concluded with the consumer society, and also contracts to carry out work (or provide services); and to present accounts on its own work in a timely manner.

A collective member of the consumer society retains its economic independence and rights as a corporate body and is guided in its activity by its own charter. The consumer society is not liable for the debts of any collective member, but the collective member is liable for the debts of the consumer society to the extent of the shares held.

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Economic relations between the consumer society and its collective member are built on a contractual basis. Any decision affecting the property rights of a collective member may be made only with its agreement. For assistance rendered a collective member pays the consumer society part of its own profit (income minus material costs) as stipulated by the agreement.

### III. The Property of the Consumer Society

13. The property of the consumer society is the fixed capital and other property that it needs to fulfill its tasks as defined by charter. The consumer society may own buildings, installations, machinery and equipment and means of transportation, productive draft animals, output produced, commodities, monetary assets and other property in accordance with the aims of its activity.

14. The assets of the consumer society are formed from the monetary and material fees paid by its members, income derived from the sale of goods and output from its own production and other enterprises and other activity, and proceeds from the sale of shares and other securities, and bank loans. State, cooperative and other public enterprises (or organizations), and also citizens who are not members of the consumer society but work in it under the terms of a labor contract, may also be involved in forming the property of the consumer society on a contractual basis by means of monetary or material payments.

15. The assets of the consumer society are subdivided into share capital, fixed capital and special funds.

The share capital is formed from the share payments made by members of the consumer society and is refundable.

Fixed capital is formed through the fees paid by the members of the consumer society, deductions from distributed profit, assets in the special funds used to finance capital investments, and various nonrefundable receipts. This capital is indivisible and is not distributed to shareholders.

The special funds are formed from gross and net income (profit) from economic activity. Procedure for forming and using special funds is determined by a general meeting of the consumer society (or meetings of proxies) giving due consideration to the recommendations of the Tsentrsoyuz Board.

16. The consumer society independently resolves all questions connected with the financing of its own economic activity, determines the kind, size and procedure for forming and using funds and reserves, opens accounts at the bank establishment servicing it to hold monetary assets and handle cash accounts with suppliers and contractors, the budget, and cooperative unions, and makes use of short-term and long-term bank loans.

17. The consumer society reallocates assets between the enterprises (economic structural units) belonging to it as required and it has the right to make loans to other consumer societies and cooperative unions, and also take loans from them; it has the right to offer credit to other enterprises and organizations using its own assets under terms defined by agreement between the parties; it may participate in the formation of centralized funds in cooperative unions to finance particular measures.

The consumer society is independently responsible for its debts, and all its property, including fixed capital, is liable.

The property of the consumer society may not be withdrawn for purposes not connected with its activity as defined by charter.

18. The consumer society has the following rights:

a) to sell and transfer to other enterprises, organizations and citizens, exchange, lease, and offer for temporary use its buildings, installations, equipment, means of transport, stock, raw materials and other material values, and also to write them off from its fixed capital if they are worn out or obsolete;

b) on a contractual basis to transfer material and monetary resources to other enterprises, organizations and citizens producing output or providing work or services for the consumer society;

c) to combine part of its own assets with the assets of state cooperative or other public enterprises and organizations.

19. The property of the consumer society may be transferred to state, cooperative and other enterprises, organizations and citizens only with the agreement of a general meeting of its members and the board of the cooperative union of which the consumer society is part, or when so decided by a court or by arbitration.

Cooperatives that are part of the consumer society as collective members dispose of their own property independently using the procedure laid down by the USSR Law on the Cooperative.

### IV. Management of the Consumer Society

20. Management of the consumer society is effected on the basis of socialist self-management, broad democracy, glasnost, and the active participation of members is the resolution of all questions concerning the activity of the consumer society.

21. The highest management organ of the consumer society is the general meeting. Each member of the consumer society, including collective members, has one vote regardless of the size of its property contribution.

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The general meeting acts as follows:

- a) adopts the charter of the consumer society and makes changes and amendments to it;
- b) elects the consumer society chairman of the board, the board and an auditing commission for a 5-year period, and also standing commissions, proxies for the rayon consumer union and delegates to the congress of the oblast (kray or republic) consumer union;
- c) hears the annual reports on the activity of the board and auditing commission of the consumer society;
- d) adopts and alters rules for the internal handling of the work of the consumer society and other internal acts concerning its activity;
- e) determines the size of members' entrance fees and the minimum share holding for the consumer society and procedure for using deductions from profits for the minimum share holdings;
- f) confirms plans for the activity of the consumer society and the reports on their execution;
- g) adopts resolutions on wages for workers in the consumer society and its enterprises;
- h) confirms the annual accounts and balance sheets and the conclusions of the auditing commission, distributes profits, and defines the specific amounts of deductions from profits to the share contributions;
- i) confirms the budget estimates to be maintained by the auditing commission;
- j) accepts instructions from shareholders for the consumer society board;
- k) assesses the work of the elected organs and resolves questions of the liability of elected officials for work omissions and violations of the charter, and is empowered to recall the board and the auditing commission *in toto* or individual members of those organs;
- l) resolves questions concerning the reorganization or cessation of the activities of the consumer society and its entrance into or withdrawal from unions.

22. The numerical strength of the board and auditing commission is determined by the general meeting. Elections are held on a competitive basis with free and unrestricted nomination of candidates for the post of chairman of the board and as members of the board and auditing commission, with broad and comprehensive discussion of candidates. Persons having convictions for crimes committed from mercenary motives may not participate in this procedure.

Balloting may be open or secret at the discretion of the meeting. Candidates are elected by a straight majority vote. If candidates receive less than half of the votes a run-off election is held, eliminating the candidates receiving the least number of votes.

Only members of the consumer society may be elected to the organs of management and control. Workers in the management apparatus of the consumer society accountable to the fully empowered meeting may not simultaneously be proxies at the meeting.

At least one-third of the members of the board and auditing commission are replaced at each election. Elected posts can be held only for two electoral terms (10 years). Election for a third term may occur only at the initiative of the shareholders and their proxies, and this requires a preliminary resolution to permit such election. This decision must have a majority of at least three-fourths the votes of those attending the meeting.

23. In large consumer societies, in order to resolve questions properly relating to the general meeting, a meeting of proxies may be convened. When this is done to resolve questions as indicated in points "a," "e" and "l" of article 21 of this charter as shown above, which directly affect the interests of all members of the consumer society, meetings of shareholders are convened in all the cooperative sectors. Any resolution on these matter is deemed adopted when it receives two-thirds of the votes of the shareholders present at all the sector meetings (the total number of votes). The voting results are announced at the meeting of proxies from the consumer society and all shareholders are informed.

24. The general meeting (or meeting of proxies) is convened by the board as required but at least once annually.

The board is also obliged to convene a general meeting (or meeting of proxies) when so requested by at least one-third of the shareholders (or their proxies), when the auditing commission so proposes or the consumer union of which the consumer society is part so resolves. In this event the meeting must be convened no later than 15 days following receipt of the request. In the event that the board fails to meet this deadline a meeting is convened by the consumer union of which the consumer society is part.

Shareholders (or proxies) should be informed of the date, venue and time of the meeting at least 7 days in advance.

25. The sector meeting is the main form for shareholder proxies in the cooperative sector. The zones of action for the cooperative sectors and the number of them are determined by a meeting of proxies of the consumer society.

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The sector meeting acts as follows:

- a) elects proxies of the consumer society for a 5-year period, and also the sector cooperative committee and the directors (or managers) of the stores, catering facilities, procurement points and other cooperative enterprises directly serving the sector shareholders, and hears their reports. The sector meeting may entrust the sector committee with the selection and dismissal of enterprise leaders;
- b) conducts preliminary discussion of candidates for the post of chairman of the board of the consumer society;
- c) examines and approves proposals for inclusion in instructions from shareholders;
- d) introduces proposals concerning the opening of new cooperative enterprises in its own sector and the closure of those that are no longer important;
- e) analyzes plans for and the results of the activity of sector enterprises and outlines ways to improve their efficiency; introduces proposals on the size of deductions from profits to share contributions and procedure for their use;
- f) offers the board proposals on providing incentive for the most active members of the consumer society;
- g) adopts resolutions on complaints about the actions of the sector committee.

28. The sector meeting is convened by the sector committee as required, but at least once annually, and also at the request of at least one-third of the sector shareholders, or of the board of the consumer society. Shareholders are informed of the date, time and venue and the agenda for the meeting at least 3 days in advance.

27. General and sector meetings are empowered to resolve questions if more than half the members are present, while a meeting of proxies is so empowered with a quorum of at least three-fourths.

When this is done, if the sector meeting is not held because of the absence of the necessary number of shareholders, then after no later than 3 days the meeting is re-convened and is deemed competent to act with any number present, and this should be so indicated in the notice for the meeting.

28. The general meeting (or meeting of proxies) and the sector meeting is open to all citizens wishing to attend.

Resolutions of the meeting are adopted by a majority of those present by a show of hands and recorded in the minutes, to which is appended a list recording those present. Resolutions that are at variance with the charter of the consumer society or existing law may be rescinded by the meeting itself or by the cooperative union of which the given consumer society is part. Citizens who

are not members of the consumer society but who work in it under the terms of a labor contract may take part in the general meeting with the right of voice but no vote.

29. The norms for representation of proxies are laid down by a meeting of proxies while procedure for selecting them is laid down by the consumer society board. Proxies represent and protect the interests of shareholders in their sector, and in their work are guided by provisions confirmed by the Tsentrsoyuz Board.

New proxies are chosen to replace those who leave or for other reasons cannot act as proxies. Proxies who fail to justify the trust placed in them are relieved of their powers of proxy at the sector meetings before the end of their term.

30. The board of the consumer society is an executive and administrative organ and is answerable to the general meeting (or meeting of proxies); it exercises leadership in the current organizational, economic and social activities of the consumer society and monitors the work of subordinate enterprises.

31. The board of the consumer society acts as follows:

- a) appoints and dismisses the deputy chairman of the board from among the members of the board;
- b) organizes the fulfillment of economic plans, insures the efficient use of manpower and material and financial resources, strengthens production and labor discipline, and insures compliance with the instructions of shareholders;
- c) enters into contracts and agreements and acts as an authorized agent in the affairs of the consumer society and has power of attorney; resolves questions concerning the admission of collective members;
- d) confirms the regulations (charters) of the enterprises and examines the reports of their managers;
- e) insures observance of internal cooperative democracy and the rights of shareholders under the charter, develops their activeness in the management of cooperative affairs, along with glasnost and criticism and self-criticism, and exercises leadership over the work of the sector cooperative committees and agents dealing with the public and accepting share contributions, and organizes training for them;
- f) carries on work in the selection, placement and indoctrination of personnel and training and skill improvement for them and sends members and workers of the consumer society for training in higher and secondary specialized educational establishments;

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g) examines criticisms, proposals, statements and complaints from members and workers in the consumer society, and also the public, and takes the necessary steps regarding them.

32. Meetings of the board of the consumer society are held as required, but at least once each month. The board is empowered to resolve questions when a quorum of two-thirds of the board members is present, including the chairman or his deputy.

Meetings of the board are open for attendance by shareholding members and other citizens, and representatives of the mass media. The members of the consumer society are systematically informed of the results of its work.

33. The chairman of the board of the consumer society and his deputy may personally make decisions on current questions concerning the activity of the consumer society. The range of such questions is determined by resolution of the board.

The chairman of the board and his deputy are personally answerable to the organs that elected them for the correctness of the decisions that they make and for their implementation.

34. The board of the consumer society confirms the decisions of the sector meetings, and also of the labor collectives at the enterprises, on the election and removal of their leaders. If a nominated candidate is not confirmed, new elections are held. When this occurs the shareholders in the sector (or labor collective) must receive an explanation of the reasons for the refusal to confirm the voting results. The board of the consumer society may dismiss an enterprise leader before his term in office expires on the basis of a resolution adopted by the appropriate sector meeting or committee, or labor collective.

In cases of abuse and in other cases as provided by the law the board of the consumer society has the right to remove elected workers from their posts and temporarily assign their duties to other persons. The board is obliged to report this to a sector meeting of shareholders (or the labor collective) within one month, and to introduce a resolution for the dismissal of the worker that has been removed and to elect a new worker to the post.

35. Disciplinary penalties, including dismissal from post, may be imposed on the chairman of the board of the consumer society and on members of the board and the auditing commission only by resolution of a general meeting of the members of the consumer society (or meeting of proxies); such penalties may be imposed on other leading workers in the consumer society by the board of the consumer society.

36. The board is answerable for all the activity of the consumer society and for the safekeeping of commodity and material values, monetary assets and other property belonging to it.

37. The board of the consumer society reports to the general meeting (or meeting of proxies) and regularly informs shareholders about its own work, making use of the sector meetings, rural gatherings, the mass media and so forth for this purpose.

38. The auditing commission monitors the economic, financial and social activities of the board and officials of the consumer society. In its activity it is guided by the Regulations for the Auditing Commission of the Consumer Society confirmed by the Tsentrsoyuz Board. The auditing commission is accountable to the general meeting (or meeting of proxies) of the consumer society.

No person can be elected simultaneously to the board and to the auditing commission. Members of the auditing commission may not be close relatives of members of the board of the cooperative or materially liable persons or the leaders of enterprise commissions that the auditing commission monitors.

The auditing commission elects a chairman and deputy chairman from among its own members by show of hands. Meetings of the auditing commission are held as required, but at least once each month.

Proposals put forward by the auditing commission are considered at regular general meetings (or meetings of proxies), while proposals presented to the board are considered within 30 days. Disagreements between the auditing commission and the board of the consumer society, and also complaints of incorrect actions, are resolved by the general meeting (or meeting of proxies) of the consumer society or by the board of the cooperative union.

39. The functions and work procedure of the sector cooperative committee are defined by the Regulations confirmed by the Tsentrsoyuz Board.

Decisions of the sector committee made within the framework of its competence are binding upon the leaders of cooperative enterprises serving the population in the sector.

### V. The Economic and Social Activity of the Consumer Society

40. In order to carry on its economic activities, using the procedure laid down the consumer society sets up, reorganizes and eliminates enterprises, associations, trade combines, public catering facilities, procurements, production facilities, comprehensive procurement-and-processing enterprises and other enterprises and works in every possible way to develop cooperatives in the production and services spheres.

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When this is done the following may be set up within consumer societies:

—structural economic subdivisions, namely, stores, dining halls, procurement points, production shops and so forth, operating on the basis of internal cost accounting and the collective contract;

—cooperatives in the production and services spheres and other cooperatives operating on the basis of the USSR Law on the Cooperative;

—cooperative enterprises organized both on the basis of existing consumer cooperative enterprises and by setting up new enterprises, operating on the basis of the USSR Law on the Cooperative;

—cooperative enterprises using in the organization of production and labor the principles envisaged by the USSR Law on the State Enterprise (or Association) operating on the basis of full cost accounting, self-financing and self-supporting production [samookupayemost];

—joint-venture enterprises severally organized with cooperative unions and other organizations.

41. The consumer society expands in every possible way the sphere of internal cost accounting at enterprises (economic units) in trade, public catering, procurement, industry and other sectors of activity and actively introduces brigade cost-accounting, collective, lease, family and individual contracts, including the lease of property, and also personal savings accounts.

42. These economic subdivisions, cooperatives, enterprise-cooperatives and cooperative enterprises operate on the basis of model regulations (or charters) drawn up giving due consideration to the model regulations (or charters) confirmed by the Tsentrsoyuz Board.

43. The consumer society forms within the subordinate structural subdivisions and enterprises labor collectives capable under the conditions of full cost accounting and self-financing of achieving high final results and of showing economic initiative and resourcefulness and a high level of social activeness. The consumer society actively recruits workers in the cooperative enterprises to become members of the society.

The labor collectives enjoy the rights as envisaged by the USSR Law on the Cooperative, and enterprises using the principles of production and labor organization as set forth in the USSR Law on the State Enterprise (or Association) enjoy the rights envisaged by that law.

44. The consumer society independently plans its own activity and the social development of the collective. When drawing up the plans it proceeds from an assessment of the effective demand of the public for goods and services and the need to make extensive use of the

opportunities afforded by the cooperative organizations and enterprises to satisfy this demand as fully as possible, and also to obtain the income required for production and social development, wages, and incentive for shareholders.

The basis of the plans is the contracts concluded by the consumer societies themselves or the unions of consumer societies with enterprises supplying goods and material-technical resources, and also with the consumers of output procured and processed by the consumer society.

45. In its activity the consumer society makes use of the long-term economic normativs envisaged in the USSR Law on the Cooperative, and also the Law on the State Enterprise (or Association) and other legislative acts.

46. The consumer society may on a contractual basis voluntarily assume the functions of marketing through the retail trade network stocks of foodstuffs and nonfood commodities allocated from state stocks, purchasing and delivering agricultural products and raw materials to all-union and republic stocks, and also producing individual consumer goods, and it may carry on other kinds of work to meet state orders.

47. As it carries on its activities in the countryside the consumer society cooperates actively on a contractual basis with kolkhozes and sovkhozes and other enterprises and organizations in the agro-industrial complex to develop the economies and self-sufficiency of rural localities in terms of goods and services and the social restructuring of the countryside.

To this end the consumer society sets up right there in the countryside comprehensive procurement-and-processing enterprises (rural cooperative procurement facilities), cooperatives, public and everyday centers, rental points, and other economic subdivisions providing services for the population.

In its activities in the cities the consumer society pays particular attention to developing the production of consumer goods and to this end creates a network of production enterprises, helps the cooperative organizations in the production and services spheres, and exerts an active influence to improve the work of stores trading in agricultural goods, and on the kolkhoz markets.

48. The consumer society enters into contracts with state and cooperative enterprises and organizations and with individual citizens to acquire and market consumer goods, production-technical output, agricultural and other products, to produce industrial goods on the basis of cooperation between economic entities, to conduct scientific and planning and research work, and construction and other work, and to provide and receive services, and enters into other contractual relations appropriate to the aims of its activity; it is responsible for meeting its

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obligations under the terms of contracts concluded in accordance with the procedures and conditions laid down by current legislation.

49. The consumer society has the right to set prices (or tariffs) independently or in agreement with a client in the following cases:

—for agricultural products and raw materials purchased at agreed prices from the public and kolkhozes and sovkhozes produced on their own private subsidiary farms and procured from them independently, and also for output manufactured by them and then marketed by the consumer society both through its own trade network and to client enterprises and organizations;

—for industrial consumer goods produced by cooperative enterprises and products for public catering enterprises, and for work done and services provided by them.

50. By its very nature the consumer society is a self-supporting [samookupayemny] enterprise. Operating at a loss is incompatible with its essential nature.

The basis of the consumer society's self-financing is its financial resources (share capital and fixed capital and special funds), and income derived from its economic activity, through which circulation and production costs are covered and the wages and profit funds are formed.

The cooperative unions providing financial support for the consumer society may if necessary allocate it assets from centralized funds for capital construction of both production and nonproduction projects, including on a pay-back basis.

51. Distribution of gross income (profits) for production and social development, and also as wages, is the exclusive right of the general meeting (or meeting of proxies) of the consumer society. Here, particular attention should be paid to economically sound relationships between assets allocated for production development and assets allocated for social needs and wages.

52. Distribution of profits is done by the general meeting of the consumer society. Deductions to centralized funds (the financing of capital investments, regulation of circulation capital, training for personnel and so forth) in accordance with long-term stable normativs are made from the profit remaining after payment of income taxes, the servicing of loans being repaid from profits, and other obligatory expenses.

Profit remaining at the consumer society's disposal is distributed by it independently as follows: to fixed capital (to increase its own circulating capital); to the fund used to finance capital investments; to the social and cultural and housing construction fund; to the shareholder dividend fund; as deductions paid to members of the society for their share contribution; and for other purposes.

In line with proposals from the sector meetings, deductions for minimum share contributions may if the general meeting (or meeting of proxies) so decides be allocated for the construction of projects to provide services for the members of the consumer society, namely, stores, dining halls, procurement points and so forth, and also kindergartens, creches and pioneer camps, and to acquire means of transport and other public needs.

53. Distribution of gross income and profit for cooperatives making up part of the consumer society or operating at its enterprises is effected by them independently using the procedure laid down in the USSR Law on the Cooperative.

54. Wages for the labor of workers in the consumer society and its enterprises are paid from a unified wages fund. Assets in the wages fund are used to pay for labor performed on a fixed salary basis, set wage rates and special rates, and to establish additional payments and wages, bonuses, one-time incentive bonuses, and end-of-year bonuses according to results.

The wage for each worker is determined from the final results of work and his own personal labor contribution, and no maximum limits are set.

Within the framework of the wages fund the consumer society independently determines the form of wages and the wage system and the number of workers and confirms the structure and numerical strength of the staff.

55. The consumer society keeps records of the results of its activities and keeps accounts books and prepares statistical reports using the procedure laid down by the Tsentrsoyuz Board with the agreement of appropriate state organs.

56. The consumer society implements comprehensive measures to improve working, everyday and leisure conditions and maintain and strengthen the health of the workers, tries to reduce manual labor on the basis of mechanization and improve the organization of work places, constructs both directly and severally with other organizations and enterprises housing, children's establishments and other social and cultural facilities, and concerns itself with improving the skills and cultural-technical level of the workers.

57. The consumer society conducts mass cultural and indoctrination work among shareholders and workers in the consumer cooperative system, fosters the development of amateur art activities, physical culture and sports, and pays special attention to involving women and young people in this work.

58. In order to develop effective cooperation with cooperative organizations in other countries the consumer society may take part in the development of foreign economic activity, scientific and technical and other

cooperation with appropriate organizations and enterprises in socialist and other countries, and also in the activity of the international cooperative organizations.

**VI. Reorganization and Discontinuance of the Activities of the Consumer Society**

59. Reorganization (merger, joining, division, separation, transformation) and discontinuance of the activities of the consumer society take place by resolution of the general meeting with notice to the cooperative union.

60. In order to liquidate the business and property of the consumer society the meeting sets up a liquidation

commission. It may also be set up by the board of the cooperative union of which the consumer society is part. The procedure for the activity of the liquidation commission is determined by the organ creating it.

61. In liquidation of the consumer society its property remaining after accounts have been settled for wages and discharge of obligations to the budget, banks and other creditors, is transferred to the cooperative union of which the consumer society was part.

09642

## LABOR

### Impact of Multishift Work on Industrial Sector

Viewed

18280058 Moscow *IZVESTIYA* in Russian 18 April 88  
p 1

[Article by Yu. Rytov: "Second Shift"; first paragraph is introduction]

[Text] The USSR Goskomstat [not further identified] has completed a simultaneous study of the trend toward two and three shift operations and the obsolete equipment and industrial space that have been freed up as a result.

Quite honestly, when I first heard about the initiative the citizens of Leningrad were taking, it inspired me to no end. What a simple, yet unbelievably promising idea! Modern equipment would operate at full capacity, two or three shifts per day, permitting older, obsolete equipment to be decommissioned. This in turn would make it possible to modernize the newly available industrial space and install new machinery and equipment. At the same time, the money saved in this way could be used for social purposes, such as housing and public facilities construction.

Need I explain how promising and fast a solution to industrial and social problems this appeared to be to all labor collectives. Let me remind you that in early 1986, the worker shift coefficient in industry (based on data from a concurrent study of enterprises in 21 parts of the country) was 1.42. That is, our industry was not even operating at a one and a half shift level! There is thus no reason to wonder at our long term inability to increase fixed capital return, which has actually declined. And at the same time, manufacturing collectives have been experiencing a shortage of funds for social purposes. So the germ of Leningrad's idea fell on fertile soil from every perspective.

But, as they say, there is many a slip twixt cup and lip. What was accomplished the year before last? As a result of the trend toward multishift operations, 43,900 pieces of machinery, worth a total of 274 million rubles, were decommissioned, and 417,100 square meters of industrial space became available. Do these figures represent large or small amounts? Very small. At the beginning of 1987, the shift coefficient had risen to 1.46; that is, by only four hundredths.

And now we have the Goskomstat's new report, which will permit us to assess the changes that took place last year.

According to the statistics from the study, the number of workers in multishift shops has risen by 320,000, representing a 2.5 percent increase. One hundred and twelve thousand pieces of machinery have been decommissioned, while two thirds of the 1.4 million square meters of industrial space made available by the changes now

house modern equipment and produce consumer goods. One hundred sixty five million rubles of capital investment has been saved and used for retooling enterprises, modernizing active plant, and building housing and public facilities.

Obviously, a lot of progress has been made compared to the year before last, but the pace at which multishift operations are being adopted is still too slow. There have been no significant changes in the way personnel are assigned to different shifts, and the level at which metal working machinery is used has hardly changed at all.

And that is not the half of it! A large number of enterprises are continuing to stress labor intensive growth. They still add machinery instead of upping the utilization of what they already have and decommissioning obsolete and worn out equipment. For example, the Ministry of Heavy Equipment's Berislavskiy Machine Building Plant had a shift coefficient of 1.13, but in 1987 added 1.8 times more equipment than it shut down. And the Ministry of the Machine Building and Tool Industry's Zhitomirskiy Machine and Automatic Equipment Plant was using its digitally controlled equipment less than two shifts per day, yet acquired more than 53 new units of the same kind, which naturally resulted in an additional drop in the shift coefficient.

We have also found that some economic management personnel see the transition to multishift operations as just another "fashionable" campaign. They give glowing accounts of how much they support the valuable initiative, spread their personnel over the different shifts, and nothing more. What has this led to? At the Ministry of Construction, Road, and Public Services Machine Building's Gotvaldovskiy Machine Building Plant, for example, the shift coefficient for workers went up in 1987, while it dropped for machinery. The results were similar at the Ministry of Instrument Building's Lutskiy Instrument Building Plant. The question is, what is the point to all these "innovations" that fail to affect production in a positive way, and make things more difficult for workers?

Indeed, we cannot ignore the fact that multishift operations are not seen in the same light the same by everyone. For many people it means the normal rhythm of their life is disrupted and their opportunities for recreation or raising their children are curtailed. To say nothing about transportation, food, or health services.

The Goskomstat study showed that the implementation of multishift operations at enterprises is generally held up because perestroika in the public services sector is at an unsatisfactory level. For example, public transportation simply does not address the needs of half the workers involved in multishift operations. Stores are able to service only 40 percent of such workers. And public cafeterias can handle only 35 percent of the workers on the third shift, and 65 percent of those on the second.

A successful transition to multishift operations can only take place if certain public services issues are resolved as well. Specifically, 24-hour day care has to become more available, and there need to be more extended-day schools. Also, the services available to workers on the job need to be expanded.

We should note that this has all been covered in a USSR Central Committee, USSR Council of Ministers, and All-Union Central Council of Labor Unions resolution entitled "Adoption of Multishift Operations by Industrial Associations, Enterprises, and Organizations, and Other Areas of the Economy to Increase Industrial Performance." (An explanation of this document was published by the papers in February of 1987.) However, if you look at the statistical report, it becomes very clear that many areas of the country are implementing the measures it discusses at a very timid pace.

Indeed, it may just be possible that this situation has resulted because many of the personnel responsible for implementing the measures only work the first shift.

13189

#### Tajik Official Notes Problems in Manpower Utilization

18280065 Moscow *KOMSOMOLSKAYA PRAVDA* in Russian 30 Apr 88 p 1

[Article by Sergey Papin, second secretary, Tajik Komsomol Central Committee: "Unemployed People"]

[Text] In order to amaze someone who has never been in Tajikistan, all you have to do is to cite the following figures: 93 percent of this republic's territory consists of mountains. But another figure is even more astonishing than this: 234,000 people do not participate in public production.

Once in a kishlak [Central Asian village] I was talking with all those who appear on graphs under the column labeled "unemployed in public production." Would you like me to explain who these people were? It turned out that the overwhelming majority of them were mothers with many children. Moreover, almost all of them were ready to work, but on condition that the places of employment be in the kishlak itself and that a kindergarten be opened.

The situation is similar throughout the republic. According to the data of sociological research studies, 94 percent of the people unemployed in public production are women the overwhelming majority of whom were ready to work but only under these same conditions: the work must be quite close to home, and a kindergarten must be available.

But, as a rule, these conditions are not being fulfilled. There is no work. Nor are there enough kindergartens in this republic. And so what else can a woman work at

except private, subsidiary farmsteading? The truth is that the stories about the fabulous profits that such farmsteading bring in are just one more oriental fairy tale. Tajikistan's per capita income is one of the lowest in the country. And as to the level of Tajikistan's birth rate, it ranks first in the country....

The problem of job placement in this republic is a youth problem. The average age of its inhabitants is 23.6 years. At the last Tajik Komsomol Congress it was stated with alarm that 38,000 Komsomol members were neither studying nor taking part in public production. People are looking for work, but it seems that, paradoxically, work is also looking for people. At the Nurek Garment Factory, for example, there was once a shortage of 300 persons for the second shift. This, of course, could be a cause for amazement. But we must take into account the way of life, the national traditions, even if only with the circumstance that wives and daughters are not willingly allowed to leave the house in the evening or at night.

For a long time we closed our eyes to the fact that the transition from feudalism to socialism, by-passing capitalism, could not proceed painlessly in Tajikistan. Many of today's problems have remained unsolved up to now precisely because for many long years we trumpeted triumphantly that the old way of life was behind us, and that all the vestiges of the past remained merely in the history textbooks.

These days, in essence, a great deal must begin anew. In Dushanbe, Ura-Tyube, and Kalai-Khumbskiy Rayon, upon the Komsomol's initiative, the first cooperatives have been established and are operating successfully. Their members are young mothers who are unemployed in public production. Every year thousands of young people, by means of public challenge and organized recruitment, travel out to shockwork construction projects in Western Siberia, the Non-Chernozem Region, and the Soviet Far East. To be sure, only half of them remain there for a long time. Of course, along with the problems common to everybody regarding organizing one's work, everyday life, and rest, other particularly specific ones arise for persons sent out from Central Asia.

This is understood, for example, in the Gorodishchenskiy Rayon, Volgograd Oblast, where people from Leninaobad Oblast work in the vegetable fields during the summer. This year it was decided to make one of the farms in Volgograd Oblast completely "Tajik." Lepeshki [flatcake] shops will be built, as well as teahouses, and libraries will have books and newspapers in Tajik.

I have become convinced that, first of all, we must abandon stereotypes, reject the over-simplified interpretation of national problems, characteristic features of natural traditions and ways of life. In recent years quite a bit has been said in this republic about the atmosphere of the cottonfields, on which more than one generation of girls has grown up. The cotton of Central Asia is

principally a "women's crop"; a large portion of the "white gold" harvest used to be cultivated and picked by women's hands. But we are now paying even more dearly for this "gold," for which any price had to be paid. For years women raised cotton rather than children. It became common that rural homes were lacking in the most necessary items, for example, a table at which the children would be able to do their homework lessons. And then, for the first time in the country, this republic's students and pupils were freed from cotton-raising duties. For two years already cotton has been harvested without them. But this is just a first step.

We must change people's psychology in both major and minor matters. Swimming pools, for example. In this republic, especially in the mountain regions, there are people who have no idea of what such pools are. In Dushanbe an MZhK [oil-and-fats complex] is under construction—the first in Central Asia. And a computer-controlled bus which has appeared here is also the first in Central Asia. And here I want to say something more—the work of Komsomol organizations under the new management conditions must be different. Komsomol committees in our republic are not being restructured rapidly enough. For example, during the Tadzhikgidrogreat Plant's conversion to the new operating methods more than 500 persons were laid off, half of whom were young people. But neither the Komsomol Committee nor the raykom have followed up on the fates of those let go because of the reduction in force.

One of my acquaintances, who is also a Komsomol staff member, once asked bitterly: "What will be left after us? A writer leaves books, an artist—pictures, a scientist—scientific works. But what will we leave? Documents with signatures in the Komsomol archives?"

Well, so be it. But, of course, a great deal depends on what kind of document your signature is appended to—whom you have defended.

2384

**Evaluation of Worker Compensation in Far North**  
18280072a Moscow *SOTSIALISTICHESKIY TRUD* in  
Russian No 5, May 88 pp 84-89

[Article by Yu. Shatyrenko: "What Must the Mechanism for Regional Regulation Be Like?"]

[Text] Regional regulation today constitutes one of the most complicated and difficult questions concerned with the organization of wages. Here we have in mind the regional coefficients and benefits for regions of the Far North and areas on a par with these regions and also the wage coefficients for work performed in desert, arid and alpine areas.

Regional coefficients first came into being in the late 1950's. Their amounts were determined based upon the differences in the cost for material support for life for the

population in a given region. For computational purposes, use was made of a standard budgetary unit for the consumption of a family consisting of four individuals (two adults and two school children) and an unmarried worker, one which takes into account the minimum amount of material support required for an individual who resides in an area characterized by a severe climate. If we ignore the regions of the Far North, then the highest cost for life is in Magadan Oblast and the Yakut ASSR. It is roughly greater by a factor of 1.7-1.8 than that for the Central Region for an unmarried worker and for a family—greater by a factor of 1.5-1.6. In the southern regions of the Far East, it is higher for an unmarried worker by roughly 35 percent and for a family—by 24 percent. Based upon these considerations, appropriate regional coefficients have been introduced into operations: for a large portion of the territory of Magadan Oblast and the Yakut ASSR—in the amount of 1.7-1.8 and in the southern regions of the Far East—1.2-1.3.

The same comparison was used for determining the coefficients for other regions of the country.

It is important to note that the difference in the cost of living is formed for the most part not based upon higher prices for food products, goods and services but by means of raised requirements for material blessings that are associated with living in areas marked by a severe climate, that is, for warm clothing, footwear, fuel and so forth. For example, the difference in the cost of living for an unmarried worker in Sakhalin Oblast is formed to the extent of 23.4 percent as a result of higher prices than those found in the Central Region and to 41.2 percent owing to greater requirements. Thus, in principle both of these factors are taken into account in the regional coefficients.

The direct effect of low temperatures, strong winds and other climatic conditions on the labor productivity level in northern and eastern regions and the related losses in earnings, for example in construction, are compensated through the establishment of lowered output norms.

It would seem that with an improved understanding of the methods for compensating man for raised expenditures associated with living in the country's northern and eastern regions, the system of coefficients employed must be orderly, understandable and easily defined in terms of degree of need. Actually, a unified system of regional coefficients based upon the mentioned principles has been in existence for some time. Since the mid 1960's, individual decisions have been handed down concerning the introduction of rayon coefficients, not for a definite territory but rather for a specific enterprise and based upon its national economic importance. The greater the number of these decisions, the greater the difficulties encountered in the principles governing the development of these coefficients and their practical implementation. In essence, a unified system of regional coefficients is retained only for workers at enterprises

and organizations of the non-productive sphere, whereas in the productive sphere higher coefficients have been established for many enterprises. Thus it is very difficult to explain to workers why they, when living under the same climatic conditions and purchasing goods at the same prices, receive different amounts of compensation depending upon which enterprise or branch they work for.

With the passage of time, the situation has become so confused that today the regional coefficients are generally understood by economic executives to represent an additional payment added on to wages, prescribed strictly and especially for labor collectives. A common practice is for 2, 3 or 4 different coefficient levels to be used in the same region. For example, 5 regional coefficients are being in Komsomolsk-na-Amur at the present time—from 1.2 to 1.7.

One cannot help but note that up until recently a clear position had still not been developed with regard to a territorial differentiation of prices for goods and rates. The high prices of a number of goods were based upon the fact that they must be delivered to remote regions from the European portion of the country, notwithstanding the fact that in many instances they are produced locally and involve low production costs. In addition, the reduction in state retail prices undertaken in 1970 for important food products in the far eastern economic region was not brought to its logical conclusion. For example, in the northern regions of Irkutsk Oblast and the Buryat ASSR, where the BAM [Baykal-Amur Trunkline] passes, very low retail prices of the 3d zone were established for grain, flour, animal and vegetable oil, sugar and some other products and in more southern regions—Chita and Amur oblasts and in Khabarovsk Kray—prices of the 2d zone. An obvious shortcoming of the system lies in the fact that the budgetary unit itself has remained unchanged for many years and is not viewed from the standpoint of its conformity to the modern requirements of the people or to the existing prices.

The regional coefficients placed in operation 30 years ago do not take into account today the improvements that have been realized in the retail price level and structure. A comparison of the coefficients against the standard of living reveals that they still provide a family with complete compensation in the form of material blessings but as a rule this is not the case for an unmarried worker.

This problem is of special importance when one considers that it is mainly young unmarried workers who are moving into the regions of new economic development. For example, the percentage of such workers at the Usinskstroy Trust is 53.5 percent and for the construction of the Boguchanskiy GES [state electric power plant]—32.1 percent. For comparison, allow me to cite

some data from the last population census: the proportion of unmarried persons among the overall number of workers in the USSR national economy is only 11.6 percent.

It would appear that there is a simple and cheap method for eliminating the confusion that has developed around the regional coefficients—to raise them to the maximum amount being employed in a particular area. Such is the nature of the requests being sent to the central economic departments by workers and a large number of enterprises.

However, there is one objectively important circumstance which precludes the possibility, both at the present time and in the future, of employing coefficients close to the true amount in certain territories having roughly the same natural-climatic conditions, even if considerable resources were allocated for this purpose. The fact of the matter is that large construction projects are being started in the North, in Siberia and in the Far East and usually in the taiga, on swamps and in other uninhabited areas characterized by sparse populations and undeveloped social infrastructures. In order to attract builders to these areas for work, the state is forced into having to establish higher regional coefficients than would be required if they were based only upon the prevailing natural-climatic conditions and living conditions. A typical example of this is the BAM, where a coefficient of 1.7 was adopted for the builders of this trunkline, which passes through several oblasts and krays, while at the same time coefficients of 1.2 or 1.3 are being employed in this region. A similar situation prevails in connection with the development of the Western Siberian Petroleum and Gas Complex with regard to the gas and petroleum workers, with higher regional coefficients being established for them at practically each deposit than those established for workers in other branches. Similar actions are now being noted in connection with the development of petroleum and gas deposits in the Pre-Caspian Lowlands. Some economists are of the opinion that the existing rate system, which takes into account the predominant working conditions in the branch, and the system of regional coefficients, assuming a correct combination, must solve all problems, including that of attracting workers into uninhabited regions. However, this theoretical position does not endure the test of practical experience. Truly, why should an individual depart an inhabited region which has the usual climate and move to the taiga, a swamp or the tundra if for such action he will merely be compensated for his raised expenditures and the unfavorable effects of the climate? The inter-branch salary level is differentiated to a certain degree by the rates. But what about within the branch? Indeed, it is one thing to procure petroleum in the Baku region or in the Tatar ASSR and quite another—at Samotlor or in the Pre-Caspian region. Certainly, one must take into account the tremendous effect of public appeals and the announcement of important construction projects for shock Komsomol workers which, beyond any doubt,

attracts the youth. But there is also a question that excites us—who will remain to live and to work at the completed construction projects? Indeed, in addition to attracting personnel, they must also be retained. In the meantime, 879 out of every 1,000 individuals who arrive in the Far Eastern region depart after a year's time, that is, roughly only 12 percent remain.

Typically and despite the salary advantages established by the state, the actual level for earnings by workers in the Far East and Siberia is lower than it should be taking into account the regional coefficients and northern benefits. Thus the average earnings of manual and office workers in the Far Eastern economic region in 1985 amounted to 300 rubles per month, or more by a factor of 1.6 than that for the Central Region. At the same time, according to computations it should have been approximately 338 rubles, or higher by a factor of 1.8. This difference was even greater at some related enterprises. For example, the average earnings for industrial-production personnel at the Amurstal Combine was 377 rubles and at the Krivorozhstal Combine—247 rubles, that is, more by a factor of only 1.5, whereas if the coefficient of 1.5 and the northern bonuses in the amount of 50 percent of earnings employed at Amurstal had been taken into account, the excess should have been by roughly a factor of two.

Such facts concerned with the gradual merging of the average wage levels are lowering the advantages in real income for the population in the country's eastern regions compared to the European regions.

This situation is explained to a large degree by the policies followed up until recently by the branch ministries. The plan is a rather simple one. Initially, a requirement exists for achieving a raised regional coefficient for one's enterprise in the east. Thereafter this coefficient is used in USSR Gosplan for obtaining an additional wage fund. And once the money has been placed at the disposal of the ministry, the original motives as a rule are forgotten and this fund is distributed among the branch's enterprises, but without taking into account the payment advantages but rather based upon the existing level for average wages. For example, USSR Minavtoprom [Ministry of the Automotive Industry] expended a great amount of effort in "obtaining" a regional coefficient of 1.15 for KamAZ, since there was no theory allowing for its use in this region. And what happened? The wages at KamAZ are today lower than those at VAZ and they are at the level for GAZ [Gorkiy Automobile Plant] and ZIL [Moscow Automobile Plant imeni I.A. Likachev, where no coefficients are being used.

Are ministries attracted to the use of coefficients only because they provide an additional wage fund? Certainly not. The ministries themselves are experiencing strong pressure by the enterprises with regard to the introduction of regional coefficients or improvements in the existing ones.

It is no secret that in recent years wages have to a large degree lost their stimulating influence. The reasons for this have been noted in Decree No. 1115 of the CPSU Central Committee, the USSR Council of Ministers and the AUCCTU dated 17 September 1986. One such reason is the competitiveness of enterprises in attracting personnel who command high wage levels. But even given all of the shortcomings of the former economic mechanism, importance is still being attached to the chief requirement: raising wages only on the basis of growth in labor productivity or growth in the production volumes. It is clear that not every enterprise is capable of doing this. Thus here we have an "ideal" instrument for increasing wages beyond any association with operational results—a regional coefficient. Naturally, all of the basic considerations are taken into account—importance of the project, shortage of man-power, deterioration in climate and requests to establish a coefficient if only on a temporary basis. USSR Goskomtrud [State Committee on Labor] has not satisfied a large number of the requests, but in some areas it made concessions and failed to display proper firmness. It even found for itself a consoling method: "the establishment of a coefficient by way of a temporary exception." It is difficult to calculate the number of such exceptions, but on the other hand it can be noted with confidence that there have been practically no incidents of such "temporary" coefficients being abolished.

Obviously, there is no point to viewing the above as an unjustified desire on the part of all branches and in all instances to obtain certain advantages for themselves. Nevertheless, the requests are based upon real problems, particularly a personnel shortage in the eastern part of the country.

Here a need exists for discussing in particular the problem of labor resources in Siberia and the Far East on the whole. The prevailing stable notion concerning inadequate labor resources in these regions is to a large extent erroneous. Recent studies have shown that the needs of the national economy can in principle be satisfied by means of local labor resources. For example, during the 1971-1985 period the size of the population in the Far Eastern economic region increased by 1.8 million (or by 30 percent), with the natural increase amounting to 62 percent and the migration increase—only 38 percent. It thus appears that the development of Siberia and the Far East and the distribution of productive forces in these regions generally warrants a new study. Indeed the bottleneck in the formation of stable labor collectives is neither wages on the whole nor payments based upon regional coefficients.

Sociological studies of manual and office workers in various natural-climatic zones have shown that the principal causes of population migration from the eastern regions include—absence of well-planned living conditions, poor supply of food and industrial goods, a climate that is unsuitable for good health, a shortage of children's

pre-school institutions and inadequate transport facilities. And only approximately 15 percent of those who were interrogated and who expressed a desire to leave indicated that their primary reason was dissatisfaction with wages.

Moreover, it is not just simply man-power but rather skilled workers and specialists that are needed at the present time in the eastern regions. Unfortunately, the existing personnel training system in these regions is satisfying this need to only a minor degree. The all-round program for developing the Far East up to the year 2000 is aimed precisely at solving mainly these social problems.

At the same time, as is evident in the above, a need has developed for solving the problems of regional regulation of wages. USSR Goskomtrud, USSR Gosplan, USSR Minfin and the AUCCTU have been tasked with preparing an appropriate concept.

What will this concept be like in general terms?

For the most part, it will involve the principles concerned with the regional regulation of wages, which we view as a very fruitful idea and on expressed in an article by V. Vladimirov (SOTSILISTICHESKIY TRUD, 1987, No. 12).

Its essence lies in the fact that each element of wages is clearly called upon to carry out a specific role. Actually, if we are merely discussing compensation for a difference in cost of living, then the regional coefficients will undoubtedly have to be uniform for all those living in a given area. However, everything in life is considerably more complicated. As we see it, an individual must not only go for example to the BAM [Baykal-Amur Trunk-line]

but he must also work on the route. And he must not settle there in a well organized settlement and enjoy the same privileges while working as a barber or a waiter. A builder in the taiga must have more privileges than a barber in a city, even if the climatic conditions are the same.

But the problem does not end with the attraction of people into uninhabited regions. Actually, the construction is completed, the industrial object acquires a social sphere, the standard of living is raised noticeably and reaches the standard of living of the old municipal centers and the advantages established formerly for the initial settlers are retained for people who are living under quite different conditions. Moreover, as a rule a problem develops in the level for the coefficients—the operating personnel "inherit" a raised coefficient from the builders and the social sphere remains with the usual coefficient for the particular area.

In all probability, there is but one solution for the situation that develops—to divide up the present regional coefficient by functions. By itself, as an instrument for compensating for the difference in the cost of living, it must be established as unified for all those living in a given area, but it should be corrected periodically depending upon a change in the budgetary unit or the price and rate level.

How better can this be done?

First of all, the difference in the cost of living should be computed for a single worker and not for a family. We will then attract the needed specialist and make it tempting for him to live in the east, acquire a family and not feel that he is living in this region on a temporary basis.

Secondly, in many eastern and northern regions the minimal amounts for the regional coefficients should ideally be raised by roughly 0.1-0.2 points. This would make it possible in the majority of instances to eliminate the confusion. But this would require additional appropriations from the state budget. They would have to be provided in advance in the five-year plans and in a manner so as to ensure a radical change in the situation by the year 2000.

Thirdly, even following the adoption of the mentioned measures it may turn out that the coefficients are higher at some enterprises than they are on the given territory. Here the solution is a simple one—to retain the former coefficients for those who had them earlier and to employ new and uniform coefficients for newly accepted ones. Similarly, the same action should be taken in areas where the regional coefficients were established erroneously, in the absence of an economic basis: to retain the active coefficients for those who earlier received payments based upon them and to abolish or reduce the newly adopted ones.

And what advantages will there be for the initial settlers?

In this instance it would be best to introduce a temporary bonus for adding on to the wages "for work carried out in uninhabited regions." Its amount should not be firmly fixed in advance, but rather provision should be made for it in the construction estimate for each individual object. A chief feature of this bonus must be its systematic reduction over a period of time in a manner such that its payment is terminated completely prior to the period for completing the construction. Obviously, this bonus is only for the builders and workers attached to their service organizations.

Finally, there is one complicated question—whether or not to pay more at some enterprises than at others, that is, to introduce a special additional payment "for work performed at an especially important installation"? From the standpoint of equal pay for equal work—the importance of the installation is of little significance.

The branch peculiarities are taken into account in the rates. It would appear that this is not worth while. Nevertheless, everyone is aware that the complicated and responsible nature of the work carried out, even at enterprises of the same branch, differ strongly. There are objective indicators for this difference, for example the average category for work and workers, the availability or absence of their own design bureau or experimental production operation, the proportion of products being developed for the very first time and others.

It would seem that under the conditions imposed by the action of the Law Governing a State Enterprise (association) or the conversion of branches over to complete cost accounting and self-financing that this question could be resolved in a positive manner. Towards this end, the ministries should ideally be authorized to use their own resources for establishing the mentioned additional payment for individual enterprises. In order to ensure that this payment does not become an annuity, it must be introduced and its amount determined in accordance with the objective data of a special scale. If an enterprise has the appropriate indicators—it can lay claim to the additional payment and if it forfeits its position it then loses the bonus. Such scales, with the branch peculiarities being taken into account, should be approved for USSR Goskomtrud and the AUCCTU. It appears that a virtue of this system could be its clear orientation towards high final results and technical production level and also its dynamism.

Everything that has been stated up until this point has related directly to the coefficients for work carried out in desert, arid and alpine regions.

With regard to desert conditions, it will be necessary to define more precisely and on a scientific basis the dividing up of the country's territory according to the degree of aridity. In recent years, powerful water lines and irrigation systems have been built in some areas, while in others the situation has deteriorated—rivers have become more shallow and the water contaminated. All of these factors must be taken into account in connection with the new regionalization. The future plan is the same as that for regional coefficients—a coefficient is accepted for all as unified and beyond it bonuses can be employed for uninhabited conditions and additional payments for work performed at especially important installations.

Whereas the coefficients for arid and desert conditions are established on a theoretical basis, those for alpine regions are established in an empirical manner. For all practical purposes, there are no adequate physiological studies of the effect of alpine conditions on the working efficiency of man. It is still generally accepted that our mountaineers retain their efficiency to a ripe old age with no additional payment. Thus this question needs to be worked out in a thorough manner.

The problem of regional coefficients does not end merely with ensuring that they are established correctly. It is considerably more extensive—in addition to ensuring branch operations in the eastern regions, the system of coefficients must also create favorable opportunities for the formation here of a permanent population. And this requires that each individual has his own home in which he can live together with his parents, grandfathers and grandmothers. Today the privileges are such that they automatically orient an individual to returning to the western regions. For example, individuals who have worked for 10-15 years in regions of the Far North or in areas on a par with them are offered the opportunity of joining housing-construction cooperatives at their former place of residence, with their housing space being reserved throughout the entire term of their labor agreement.

Perhaps the time is at hand for examining these privileges—should they be presented to northerners only in Siberia and the Far East?

At the same time, it would appear to be advisable to introduce a payment based upon regional coefficients for pensioners residing in a particular area regardless of the area where they were assigned their pensions. The same should be done in the case of other payments from the public consumption funds—allowances, grants.

There is still one vital question that is associated with the efficient functioning of a system for the regional regulation of wages—this is the amount of earnings for which a coefficient is computed. Today it is limited to 300 rubles per month. With the conversion over to the new salary conditions in production branches during the current five-year plan, the earnings of many workers will draw closer to this limit and exceed it. But this question is of even greater importance to workers whose overall working time is dependent upon seasonal conditions: lumberjacks, mine workers, transport workers in the north and others. The retention of a limit for all of them signifies the same amount of payment based upon a regional coefficient, regardless of the actual work results. In all probability, it makes sense to reject gradually this limit.

Using their own wage funds, enterprises should be authorized to compute the coefficient and the large earnings, in particular, for workers in the leading professions and specialties.

In addition, it should be borne in mind that, in conformity with the Law Governing a State Enterprise, enterprises must now examine the situation to determine which privileges and advantages are suitable for their workers, in the interest of ensuring that they are not less than those established by the state. Thus it would be useful to provide enterprises in the northern and eastern regions with correct reference points for solving these problems, while taking into account their specific operations. Appropriate recommendations having to do with

the establishment of privileges for military personnel discharged into the reserves, the allocation of loans for housing, travel expenses and others should ideally be developed.

The considerations expressed here are not beyond questioning. Moreover, there are some other well known points of view concerning regional regulation. When developing a complete concept, it is obvious that the opinions expressed by the ministries, enterprises, local organs and scientific institutes must be taken into account. For example, scientists attached to the Scientific Research Institute of Labor have interesting proposals for replacing the regional coefficients in Central Asia with bonuses in the same amounts for length of service, in accordance with the type of northern privileges. The

original conclusions were drawn by scientists of the Institute of Economic Studies of the Far East Scientific Center of the USSR Academy of Sciences, when studying the problems concerned with the labor resources of the Far East.

All of the above requires thorough analysis and the adoption of specific recommendations. A chief concern is to ensure that the work is not postponed. The problem awaits a solution.

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## CIVIL AVIATION

### Bureaucracy Delays Visibility Simulation System Project

18290129 Moscow GRAZHDANSKAYA AVIATSIYA in Russian No 5, May 88 pp 42-43

[Article by GRAZHDANSKAYA AVIATSIYA special correspondent I. Kazanskiy under the rubric "Let Us Name the Source of Mismanagement": "Zigzags on the Path of Invention"]

[Text] Minister of Civil Aviation A. N. Volkov noted in one of his speeches that the problem of training cockpit personnel under reduced weather minimums is a stumbling block on the path toward all-weather operation by our aircraft. Fortunately, he said, there is now a simulator which makes it possible to train crews under conditions that are as close as possible to actual conditions.

The inventors have named their creation "the visibility simulation system" (SIV for short). Perhaps there was nothing special in its creation, development is development: they had an idea, they discussed it, made a prototype, conducted a test, and began to put it into use... The enthusiasts had to overcome only the problems that were really very nontechnical in nature; at times the troubles in developing the system began to resemble the plot of an adventure story. Everything was here: simple misunderstanding and departmental ambitions, unwillingness to make additional efforts, and the worst kind of bureaucratism! These are also the circumstances that have compelled us to make a story of invention a contribution to glasnost.

The beginning extends back to those distant years when Aeroflot's flagship, the intercontinental Tu-114, caught the fancy of the entire aviation world. A crash on takeoff under instrument weather conditions became a point of reference. As usual, the simplest and most "effective" decision was made: to prohibit takeoffs under instrument conditions so that something like this is not repeated... The "effectiveness" of this step was such that wits soon after began calling the Tu-114 the "tsar-airplane"—by analogy with the "tsar-cannon" and the "tsar-bell." Not so much for its huge size for those times as for the similarity in situations (it is common knowledge that the "tsar-cannon" does not fire and the "tsar-bell" does not ring...).

Accidents will not happen if we do not fly at all, of course. But who needs an air transport that does not fly? However, everyone knows that it is sometimes simpler and safer for an official to prohibit something than to authorize it. Returning the Tu-114 to the skies was difficult for this reason. First of all, there were insufficient research data to make a well-grounded decision, not a volitional one, on permissible takeoff conditions. It was not enough that it was not so simple to "catch" the weather necessary for the tests. Another complication

was that if an aircraft takes off under borderline conditions, it will not be able to land at the same airport (the landing minimum is higher than for takeoff).

Semen Lvovich Belgorodskiy (now one of the sector's leading scientists and a doctor of technical sciences) suggested what was evidently the only possible solution: "not to expect favors from nature," and if the actual conditions are not suitable, they must be created artificially. Everything appeared technically simple: position a translucent screen in front of the pilot which simulates deteriorating visibility. A small group of GosNII GA [State Civil Aviation Scientific Research Institute] specialists under the leadership of S. L. Belgorodskiy was engaged in putting this concept into use. At first they tried to use photographic and X-ray film as a screen, illuminating it at different exposures.

The first experiments showed that simplicity acts to the detriment of naturalness. The screen did not provide for varying degrees of deterioration in visibility. But real approach lights are seen differently in the fog: the closest ones are brighter and the ones in the distance, where the light passes through a thicker layer, are dimmer. In addition to the simple attenuation of light rays, they are dispersed in the droplets of water in suspension—it is as if they are washed out, anan expert with skillful hands, turned out to be in the group. In these very hands an ordinary film made of lavsan, conditioned with a fine-grained sandpaper, was turned into a screen which met all the requirements (the light was dispersed on its uneven surface exactly as it is in the water droplets in the fog). Flight tests were conducted with this model by experienced GosNII pilots: Vladimir Albertovich Plume, Vladimir Nikolayevich Klyaus, and Pavel Vasilyevich Miroshnichenko.

It turned out that it is important to install the screen at the pilot's eye level initially, first of all, and secondly, to position it in accordance with the aircraft's altitude above the ground (the magnitude of the visual angle depends on it). So they arrived at a roll design—the lavsan film was wound on upper and lower spindles and could be positioned upward or downward. They did this manually in the course of the tests. This method was still suitable for experiments, but then the system's deed out that it is important to install the screen at the pilot's eye level initially, first of all, and secondly, to position it in accordance with the aircraft's altitude above the ground (the magnitude of the visual angle depends on it). So they arrived at a roll design—the lavsan film was wound on upper and lower spindles and could be positioned upward or downward. They did this manually in the course of the tests. This method was still suitable for experiments, but then the system's developers realized that its potentialities were far greater and it could be used as a means for training crews as well. But the extension of the film had to be automated for regular flights.

This task was performed at one of the Minaviaprom [Ministry of the Aviation Industry] enterprises by Yuriy Stepanovich Rozenfeld, who had become interested in the development. From this point it took on the initial contours of an industrial product. A computer to control the extension of the film in accordance with signals taken from the radio altimeter and the pitch sensor was added to the system.

This was now a complete unit suitable for mass use. Arkadiy Aleksandrovich Muzalev and Sergey Mikhaylovich Aleksanyants worked out the method for the screen's initial "display." Crew training was begun. The result exceeded all expectations. I will cite several figures for a comparison. Previously, before the development of the SIV, a year was required on the average for a crew to make the three approaches necessary for a Category I landing authorization (the appropriate weather conditions had to coincide with the training flights as well). Only 18 percent of the crews were given this authorization in Aeroflot as a whole. The aircraft suited for Category I flights, the Tu-134, Tu-154 and Il-62, were not being utilized with sufficient effectiveness. Now, with the aid of the SIV, this figure has been brought up to 90 percent. The conditions are even more demanding in the training exercises for Category II operations than in actual flight, in the pilots' unanimous opinion. And most importantly, although the training is as close as possible to a real takeoff or landing under reduced minimums, the pilot remains confident and there is no nervousness. On the one hand, the instructor, whose field of vision is not limited, monitors his actions, and on the other hand, the SIV can be "switched off"—he need only press a button—and the transparent part of the screen appears before the pilot.

"Experience in using the SIV-1 in Il-62 and Tu-154 aircraft has demonstrated its high effectiveness as a means of speeding up the training of cockpit personnel for flights under reduced landing and takeoff minimums," the minister of civil aviation wrote to the minister of the aviation industry in 1979. In the same year the system was given the USSR VDNKh [Main Committee for Exhibition of Achievements of the National Economy] gold medal and the GosNII GA was given a first-class certificate. In 1982, the group that developed the SIV-1 was transferred to the NETs AUVD [Scientific Experimental Center for Civil Aviation Air Traffic Control Automation].

However, the first part of our story, which was practically devoid of conflict, is ending. We come to a new page, which may be entitled "Introduction." And here the plot thickens.

An application was submitted to the Goskomizobreteniy [State Committee for Inventions and Discoveries]. The response was highly original: rejection for two reasons. First of all, a computer is being used in the system, and there cannot be anything new in it, they say. In the second place, it has too many creators! As if they may

have shelved the application and later learned from the press that "a new and original" device had been developed abroad (such things have happened more than once). But an incident intervened. A delegation of specialists from the United States which had visited our country expressed interest in the SIV concept. At first the Americans contended that there is no reason to conduct training flights as long as there are flight simulators to train the crews. But after hearing out the arguments on the characteristics of training under conditions which are as close as possible to actual flight, they changed their opinion. One proof of this is that special goggles based on liquid crystals, which perform the functions extensively applied in the SIV in a simplified manner, are under development in the United States. But the most important point is that the American specialists expressed a strong desire to acquaint themselves with the system's details.

Who is responsible for the transfer abroad of information on new technology that is not protected by a patent? The bureaucrat fears personal responsibility most of all. He is even able to disturb his drowsiness and develop tireless activity here. Elements of the innovation and the practical value of the device were revealed instantaneously.

This value was established by preliminary calculations, incidentally. It was based on the savings in flight time when crews are trained with the SIV-1. The sum of more than 640,000 rubles was acquired, with which all the interested administrations agreed. Based on this sum, the developers were paid a bonus for the new technology.

But here the story takes the next zigzag: payment of compensation for authorship was made in accordance with the actual savings confirmed by the financial planning and reporting documents of aviation enterprises. Imagine the additional trouble this makes for those who do not want to exert themselves very much on the job. It is simpler not to have anything to do with it: it is not for me, and so forth. And here a document comes to light in which the Flight Service Administration states officially that the SIV-1 is not providing a savings in flight time. And the Economic Planning Main Administration, which did not speak out against the estimate of economic efficiency in 1982, agrees with this opinion, which is then rubber-stamped in the other administrations. And those who should have assisted in every possible way to speed up the introduction of technical innovations in the sector and should have looked out for the innovators' interests in the performance of their official duty—A. Tsosina, the chief engineer for inventions, and P. Yurov, chief of a department of the Scientific and Technical Main Administration—did not break the ring of formal replies. Justice was restored only through intervention "from above."

However, the bureaucratic games ricocheted where they hurt the most. The fact is that development of the SIV was supported to a significant degree by the enthusiasm

of Yuriy Stepanovich Rozenfeld and his colleagues. The managers of organizations were always unenthusiastic about this system, to put it mildly: too much trouble, a heavy responsibility, and the cost of the item is not high. It is much easier to resolve their problems with the aid of expensive instruments. For this reason, as soon as the new opinion of the Ministry of Civil Aviation became known, it was used as a powerful trump card. Why turn out an inefficient device, they say, under the conditions of cost accounting and self-support? If the next fortuitous event had not occurred, the "matter" possibly would have been closed completely. But this conflicted with work by specialists in military transport aviation, who assessed the prospects of the device right away and placed an order for its manufacture.

After the statement of the lack of impact, a sad fate overtook the development of an SIV for the other types of airplanes and helicopters in civil aviation. Citing the workload, limited resources, and other reasons of this kind, industry has repeatedly put off this work. The problem of developing an SIV for "small aircraft" is not being resolved at all.

But what about the developers of the SIV-1? Are they gloomy, have they lost heart? No, they are making plans and thinking about further refinement of the system. It must be said that in today's form it counts on exceptional honesty: by changing the position of his head, the trainee can "peek" and improve the visibility. And of course, the electromechanical system for extension is imperfect, and the laysan film changes its optical properties in time as well. In principle, the paths for improvement are well-known: introduce a third sensor to determine the pilot's head position and utilize a liquid crystal screen. But there are great technical problems, and they cannot manage without the help of industry here. Further. Provision has been made in the design for the application of various modifications in different types of aircraft. So new prototypes must be developed—including for prospective airplanes and for helicopters, for which the SIV is just beginning to be used. A great deal of work is being done by specialists in Anatoliy Petrovich Zyuzin's department, and the sector headed by Aleksey Ivanovich Kuvyrkov is engaged in introducing the SIV. The leading executive for introduction, testing, and scientific support for the SIV, Irina Viktorovna Gorodnicheva, has described the extensive plans for developing units which can be used under daytime conditions (not only at night, as at present), tests of the SIV with low-intensity lights, the organization of exercises on cargo flights, and other plans.

In a word, the innovators are not running short of enthusiasm. But we cannot set our hopes on enthusiasm alone in speeding up scientific and technical progress! It is high time that it is backed up by a strong, modern industrial base. And of course, we realize the importance of the work that is being carried out.

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**IL-96-300 Test Flight Preparations**  
*18290128a Moscow SOVETSKAYA ROSSIYA in  
Russian 24 Jun 88 p 1*

[Report by A. Nemov: "Before Takeoff: The IL-96-300 Gets Ready for its First Flight"]

[Text] The red light, like a danger signal, caught our attention right away. The display reddened: "No 1 engine failed." This sentence was repeated by a woman's voice as well. At another time it would appear well trained and sincere. But the crew of the huge 300-seat aircraft had something to think about...

Aleksandr Merkulov "passed over" the keyboard. The computer began analyzing the situation. Seconds went by... Finally recommendations were made. They succeeded in correcting the malfunction in several minutes. The red light was replaced by a green one, and the display showed that everything was normal. "It's time to get to the ground," Aleksandr Merkulov observed. And the test foreman came down a metal ladder from the three-story level of the IL-96-300 cockpit to the hangar floor. He was satisfied, even in spite of the minor failure; after all, the assembly of an aircraft with a fundamentally new design had been completed. And although the "newborn" is still surrounded by "assembly scaffolding," it is ready to leap into the sky...

A leap which our aviators are eagerly looking forward to. Judge for yourselves. The technical level of the new aircraft will match the level of aircraft which are only planned for production after 1990 in the leading Western countries. Practically more than half of all the equipment in the IL-96-300 has been installed for the first time. And it is not a replica of the IL-86, which is hardly an old aircraft, either... But let the professionals speak. Honored Test Pilot of the USSR Stanislav Vliznyuk tells us:

"I entered the cockpit of the new aircraft not as an ordinary observer, but as a test pilot. Before this we had just familiarized ourselves with the new equipment and completed work on components of the IL-96-300 on special test stands on the ground. Now we will be preparing in earnest for the first flight..."

How is the new aircraft different? Improved reliability. Everything has been done to ensure that a nonstop flight of 9,000 kilometers for 300 passengers is safe. Several computers control the operation of all the aircraft's systems. Data do not appear on panels, but on six display screens. This has made it possible to discontinue the use of hundreds of the usual flight and navigation instruments. So pilots will be able to work with more convenience. You can size up the entire situation with several switches.

The number of crew members has also been reduced. Instead of four persons, there are only three. A navigator is no longer necessary. The new on-board flight and navigation complex will provide for fully automated all-weather navigation in any part of the globe and automatic landing. The aircraft's developers have shown concern for the passengers. The cabins have improved sound insulation and more comfortable seats have been installed. There will be an in-flight buffet and a video cabin for those who wish to use it...

Academician Genrikh Novozhilov, the general designer and delegate to the 19th All-Union Party Conference, tells us:

"Progress in aviation is impossible without the use of the most advanced equipment and technologies. It is precisely for this reason that many concepts have been incorporated in the IL-96-300 for the first time. We have already mentioned that the aircraft is filled with electronics and computer hardware. I will say only that all these systems have multiple backups, which means that the likelihood of their failure is negligible..."

The innovations include extensive use of composition materials (carbon plastics, and so forth). At present, 7 to 10 percent of all the aircraft's structures are made of composites. The aircraft's flying weight has been reduced by 2.5 tons just because of this. This has made it possible to take an additional 20 passengers on board.

You will also find new approaches in the IL-96-300's airframe itself. The wings have been improved aerodynamically. Adhesives were used extensively in assembling the basic airframe. This has extended the service life and reduced weight.

Incidentally, here is an economic result. While the IL-62 consumes 47 grams of fuel per passenger-kilometer, the IL-96 will use only 23...

I would like to mention one more thing. We are stuck with records, decisions, reports, agreements and permits as before. Work on the IL-96-300 has clearly demonstrated this. We must remind ourselves more often that modern aircraft are still being developed at the KB [design bureau] and at the plant, not in offices.

Vladimir Orlov, chief of the assembly shop of the Machine Building Plant imeni S. V. Ilyushin, says:

"We have been aware of our responsibility in assembling the IL-96-300. Taking into account that there is a considerable amount of new equipment in the aircraft, we

organized retraining for our specialists. All work has been carried out in two or three shifts. And we are proud that it has been completed on the eve of the 19th Party Conference..."

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#### Nonstop Varna-Tashkent Service Begins

18290128b Moscow *IZVESTIYA* in Russian  
26 May 88 p 1

[Report by V. Belikov: "An Airway of Friendship"]

[Text] A new route has been added (one), another aircraft will depart Tashkent in the opposite direction with a large group of Soviet travelers.

The first flight on the new line will be made on 26 May by 'Balkan' Airlines on the newly modified Tu-154M by a group of tourists to acquaint them with the centuries-old culture and architecture of Central Asia. The distance of more than 3,500 kilometers will take five flight hours. On the same day /More precisely, late evening on Thursday/ another airplane will depart Tashkent in the opposite direction with a large group of Soviet travelers.

Flights on the new route will be made once a week at first. In accordance with regular practice in mutual relations between Aeroflot and the "Balkan" line, the Varna-Tashkent-Varna route will be used jointly by the two airlines. The expenses and receipts will be divided in half, and Soviet and Bulgarian passengers will be flown alternately in aircraft of the two partner enterprises.

Several days before this aviation premiere, the 21st Tu-154 airliner purchased by Bulgaria since the beginning of its production was turned over to the "Balkan" Airline by Aviaekspot at the Sheremetyevo Airport. As V. Studenikin, the general manager of our foreign trade association, noted, this is the 100th aircraft of this type delivered for export; 40 of them are the Tu-154M version, one of the most economical modern airliners.

This aircraft holds a leading position in our aircraft industry's export program. It has been purchased and is being successfully operated by the airlines of the socialist countries in Eastern Europe and in the Middle East, it is making flights between cities in China, and it is used on the route linking the capital of the Latin American state of Guyana—Georgetown—with New York.

The Tu-154M is also being flown on Aeroflot's domestic routes.

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